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The Canadian Practitioner and Review

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Original Communications

THE DIAGNOSIS OF CONDITIONS CAUSING HAEMATURIA *

J. J. Mason, M.D., London, Ont.

A patient presenting with a hæmaturia, either microscopic or macroscopic, demands a thorough general as well as local examination. It is wise, at the outset, to make sure that we are dealing with hæmaturia. Senna, rhubarb, carbolic acid, excess of uric acid or bile pigments give a bloody color to the urine. Consequently, the microscopic detection of blood cells should be positive before we go any farther with our examination. The microscope also distinguishes hæmaturia from hæmoglobinuria. A full personal and family history should be obtained. The latter is of little importance, but the former is all-important. If the family history is decidedly tubercular, we are on the lookout for some manifestation of tubercle. If the bleeding follows an accident, the type of accident is of value. Falling astride a buggy wheel may cause rupture of the urethra. A fall from a height, especially if the loin strikes an object on the descent, may mean a ruptured kidney. A crush between the bumpers of a railway coach may mean a fractured pelvis, with a laceration of the bladder or the urethra. The type of accident that happens to a patient previous to hæmaturia is consequently very important. The personal history also takes note of early ailments. A tubercular joint, a tubercular lung or tubercular suppurating lymph nodes may mean the nidus of a later tubercular kidney or epididymus. Rheumatic fever as a precursor of valvular heart disease, with later broken compensa-

* Read at the meeting of the Ontario Medical Association, Niagara Falls, 1911.

tion, points to the source of hæmaturia from a congested kidney. Scarlet fever or any of the severe infections, as septicæmia or influenza, may be the cause of a nephritis that gives vent to the bleeding. The ingestion of certain drugs, turpentine, cantharides, mercury, and some vegetables rich in oxalates, as rhubarb, etc., may at times be the source of the hæmaturia. If the patient is hæmophilic, or has scurvy, our diagnosis is made before we touch the examination of the urinary organs.

The general physical examination of our patient should precede the urinary examination, as we begin at the least frequent sources and are not as liable to mistake our case. If the patient has an active tuberculosis present, even if it is only a necrosed phalanx of the finger or a suppurating gland in the neck, we naturally direct our attention to some tubercular manifestation in the urinary tract. If the patient has a valvular heart lesion with an endocarditis present, it may help us to a diagnosis of some apparently obscure hæmaturia.

Having completed a general survey of our patient, we examine the urinary system. It is wise at the beginning to never take it for granted that because a patient presents symptoms referable to one part of the urinary tract, that such part is diseased; for example, a patient with renal calculus or tuberculosis may have all bladder symptoms. There are some general deductions from the character of the urine. If the blood is intimately mixed with the urine, it likely comes from the kidney. If renal blood casts are present, the kidney is bleeding. If the blood comes in a gush at the end of urination, and the urine plus the blood are more in amount than normal, the bleeding likely comes from the kidney. If we have terminal hæmaturia with much cystitis, it is likely the bladder or posterior urethra that is at fault. If the bleeding is at onset of urination, with the end urine clear, we naturally look to the anterior urethra for the solution. If we find a blood-clot shaped like an earthworm, the ureter may have made the cast. These general deductions have many fallacies.

In reviewing the diagnostic features of the more common causes of hæmaturia, considered anatomically, I shall do so to the exclusion of the cystoscope and ureteral catheter; not that I do not value the very great aid the cystoscope gives us in diagnosis, but because in a paper of this kind it is hard to give descriptions of lesions that will tally with the actual observance of same. We can make a provisional diagnosis and later corroborate or refute it with the cystoscope.

Kidney Conditions Causing Hæmaturia.

1. *Calculus.*—A patient with a calculus in the kidney for years may never have an attack of nephritic colic, and the case be only diagnosed by a sudden pyuria with or without blood cells. Usually, however, a patient with stone in the kidney suffers from nephritic colic. He is seized with sudden, intense, agonizing pain in the loin at the edge of the erector spinæ, and running through to the abdomen at the level of the umbilicus and at the border of the rectus muscle, and at times radiating down the groin to the testicle, or (to the labia in the female) accompanied with normal pulse and temperature, sometimes with nausea and vomiting, some rigidity of lateral abdominal muscles, and practically always with hæmaturia, often only in microscopic amounts. The hæmaturia may only be present in the urine that is first passed after the attack, or it may last some days in decreasing amounts. It is risky to make a diagnosis of stone in the kidney, without hæmaturia, especially when the patient is having attacks of colic. If we have hæmaturia persisting, and the patient is moving about, counting the number of blood cells in the morning urine and comparing it with the number in the evening urine may help us to make a diagnosis. Rest lessens the hæmaturia due to stone, while exercise increases it. If the patient with symptoms of calculus has passed one, or has had one removed from the bladder, or if the duration of the symptoms puts tubercle or malignancy out of the question, calculus can be diagnosed with more certainty. The X-ray and the wax-tipped ureteral catheter of Kelly may be used to corroborate.

I shall cite a few cases.

1. John E., aged 33, came to my office early one morning with a sample of urine which had been passed a few hours before, immediately following an attack of renal colic. His general examination was negative, except a tender spot at the border of the erector spinæ muscle, and just below the 12th rib on the left side. The urine was loaded with blood, without pus, and with abundance of oxalates. He had not lost weight, and had an attack exactly similar two years before. At operation I removed an oxalate stone as large as a marble from the pelvis of kidney.

2. Bert C., aged 30; family, personal and general examination negative; had a typical attack of renal colic, with the passage of microscopic blood on April 1st, 1911, another attack on April 21st and 29th, and again on May 23rd. Microscopically, hæmaturia was present after each attack, and marked tender-

ness in angle of 12th rib and erector spinæ. X-ray revealed nothing but the hæmaturia, without pus following these attacks, with negative tubercular tests, makes the case positive.

3. Miss C., had typical attacks of renal colic, at times so severe as to require chloroform, but without blood in catheter sample following any of the attacks. The attacks were coming with such frequency that the attending physician thought exploration advisable, but operation revealed a normal kidney.

4. Harry F., aged 29, whom I saw first in a typical renal colic attack in February, 1909, following which he passed blood in microscopic amounts. I saw this man in possibly a dozen attacks in the next 23 months, some at closer intervals than others. He always had blood in the urine following the attack. The X-ray was negative; he procrastinated operation. However, he passed an irregular calculus slightly larger than a pea, on January 1st, 1911. He has had no attack since.

2. *Tuberculosis of Kidney.*—The hæmaturia of tubercular kidney is not characteristic. If the patient has a tubercular family history, and has a demonstrable tubercular lesion in some other part of the body outside the urinary tract, or a secondary focus in the urinary tract, and is complaining of failing health, with loss of weight, evening temperature, frequent urination, and increased urinary output, we begin to seriously consider tubercle. If, on the examination of the urine, we find blood, much pus, and the tubercle bacillus, and the tubercular test is positive, our doubts are better founded. If the guinea-pig test is positive, especially if we have some doubt about the tubercle bacillus being genuine, we have positive grounds for the assumption of tubercular urinary disease. We now know that the kidney is nearly always involved primary to the bladder. Hæmaturia in tubercular kidney is more liable to be more profuse in the early stages, according to Casper, because the progression of the disease is associated with increasing obliteration of the blood vessels.

The normal kidney is often the larger on palpation, due to compensatory hypertrophy to make up for loss of kidney substance in the diseased one. If there is one symptom in tubercular kidney that overshadows the rest it is the bladder irritability associated with much pus, which persists and develops without apparent cause.

3. *Malignancy of Kidney.*—Hæmaturia was the most frequent sign in 83 reported cases, and the first sign in 41 of those cases. Garceau found hæmaturia a prominent symptom in 50 per cent. of 106 cases, but in 35 cases it was absent. Hæmaturia

in a child under seven years of age strongly suggests malignancy. The bleeding of kidney tumor is as a rule suddenly profuse, apparently causeless, and may persist for some days, when an interval of normal urine ensues, to be followed again by the same profuse and intermittent hæmaturia. This bleeding is not influenced by rest or occupation, and is often more profuse on lying down than when the patient is moving about.

Guyon mentions a symptom that may aid diagnosis. In kidney tumor the blood suddenly disappears, to return as suddenly with the passage of an ureteric clot molded in the ureter, due to temporary blocking. Tumor is usually discovered by the patient himself, and pain is often present of a dull, aching character in loin with at times colic, if blood clots are passing down the ureter. The combination of the characteristic hæmaturia associated with pain, tumor and loss of weight, is usually sufficient for diagnosis.

4. *Chronic Interstitial Nephritis.*—There have been enough cases reported of primary bleeding in this class of case to make us always think of it when we have hæmaturia to deal with. The associated symptoms and signs are sufficient for diagnosis as high blood pressure, accentuated sounds at the base of the heart, changes in eye grounds, and with the appearance of urinary sediment under the microscope.

5. *Acute or Sub-Acute Parenchymatous Nephritis.*—I shall refer to this type by citing a case. Mr. H. C. S., aged 36, presented himself in March, 1910, complaining of nausea, frequent micturition and at times hæmaturia. His family history was negative. Three years before he had what was diagnosed influenza, at which time he passed blood in the urine for three days. He had a similar attack in December, 1909. He had an abscess in the neck fifteen years before, which discharged four months, and six months before coming under my observation he had some enlarged glands removed from the neck. On examination, I found the patient with marked œdema of abdomen, back (the lumbar pad), legs, and especially of scrotum and foreskin, the urine loaded with albumen, much blood, abundance of casts and some pus. The output for twenty-four hours was from twenty-five to thirty-five ounces. The tests for tuberculosis were negative. Under rest, hot packs, etc., patient improved after some months, and the kidney lesion assumed more of the interstitial type.

Of the more common acute type following scarlet fever, diphtheria, etc., etc., I shall not speak.

6. *Renal Infarct.*—A continuous pain in the kidney, which

is increased by pressure, accompanied by endocarditis or myocarditis, and associated with bloody urine, is diagnostic of kidney infarct, according to Zuckerkandl. If the patient is suffering from septicæmia, and develops acute pain in the kidney, with the sudden appearance of blood and albumen, we can suspect an infarct.

7. *Moveable Kidney.*—This condition produces hæmaturia, following Dietl's Crisis. The kidney is movable through a wide degree on palpation, and is diagnosed by exclusion of other sources of hæmaturia.

8. *Acute Suppurative Conditions, as Pyelitis and Pyelonephrosis* from the colon or other pus-producing organisms, may be ushered in by hæmaturia. The bacteriological tests here came to our assistance.

9. Hæmorrhage from the kidney following catheterization of a very full bladder.

10. *Angioma of Renal Pelvis.*

11. Polycystic Kidney, in which two tumors ars usually present.

12. *Serous Cyst of the Kidney.*

These conditions are all rare.

13. *Essential Renal Hæmaturia.*—This condition, in which no anatomical lesion can be found, is fairly common. Kapsammer, in a recent work, speaks against an essential hæmaturia. He thinks there is always some lesion present, often an early chronic nephritis.

Bladder Conditions Causing Hæmaturia.

1. *Vesical Calculus.*—The hæmaturia of vesical calculus is made worse by exercise, is more prominent at the last part of urination, is usually fresh blood, and is practically always associated with pain. The pain of bladder stone is increased by jolting, it is worse at the end of urination and often at the point of the penis, and at times causing straining at stool, with formation of hæmorrhoids. Rectal and bi-manual examination, supplemented by the X-ray, the stone searcher and the cystoscope, are sufficient for diagnosis.

2. *Tuberculosis of Bladder* is usually secondary to tuberculosis of kidney or to some focus in the lower urinary tract. However, frequent painful urination continuing after the act, slight hæmaturia and vesical irritability, made worse by instrumentation, and the detection of tubercle bacillus in the urine, with a positive tuberculin test, may help us to make a provisional diag-

nosis. It is well to remember that the most intense bladder irritability may be due to purely kidney conditions.

3. *Tumor of Bladder.*—The first sign is hæmaturia unless the growth is near the urethral orifice, when frequent micturition is the earliest sign. The hæmaturia of vesical tumor is often enormous, ensues suddenly without apparent cause, and often disappears as quickly as it came. The last urine passed contains more blood than the first. It is often bright red in color, and contains pus. Gentle instrumentation causes free bleeding. According to White and Martin, the successive appearance of single symptoms suggest tumor, while the immediate association of several is the rule in inflammation. In place of hæmaturia there may be what Ultzmann calls fibrinuria, that is, in place of pure blood the albuminous constituents of the blood are exuded through the distended vessels in the neighborhood of the growth, causing the urine to coagulate in gelatinous masses when passed. If fragments of tumor are passed the diagnosis is easy.

4. *Acute Cystitis* frequently gives rise to hæmaturia. The point in diagnosis is from an acute pyelitis or pyelonephritis. In bladder inflammation the urine is usually alkaline, especially if decomposition is present. In pyelitis the reaction is acid. Renal elements are lacking in cystitis. The sediment in the urine of cystitis settles rapidly to the bottom of the vessel into which it is passed. The sediment in the urine of pyelitis settles slowly. The location of pain and tenderness help in the diagnosis.

5. *Varicose Veins* or *Atheromatous Arteries* are said at times to rupture into the bladder and cause hæmaturia.

Prostatic Conditions Causing Hæmaturia.

No. 1. Enlarged Prostate.

No. 2. Acute Prostatitis.

Both these conditions are easily diagnosed per rectum, in conjunction with the history and bladder examination.

No. 3. Calculus of Prostate may produce hæmaturia, and is diagnosed by a sound in the bladder, along with rectal examination.

No. 4. *Cancer of Prostate.*—Hæmaturia is often an early sign. The patient complains of pain radiating to one or both sciatic regions, to the sacrum or to the groin. On rectal examination, marked induration of the gland is found to extend upwards onto posterior surface of bladder, between seminal vesicles.

Urethral Conditions.

No. 1. Posterior Urethritis, which may be of tubercular, gonorrhœal, or of some other origin. If gonorrhœal, we have the history of the attack and the demonstration of the gonococcus on a smear preparation. The onset of a posterior gonorrhœal urethritis is often ushered in with terminal hæmaturia, frequency of micturition, priapism and discomfort in the perineum. A tubercular posterior urethritis is often primary to a tubercular epididymitis. In this instance we have a painless moderate urethritis, frequent micturition, hypersensitive posterior urethra and a terminal hæmaturia. The urine should be thoroughly examined for the tubercle bacillus after washing penis, and irrigating anterior urethra, in order to eliminate the chance of the smegna bacillus being mistaken for the tubercle bacillus. We can also get a non-gonorrhœal and a non-tubercular posterior urethritis ushered in with a hæmaturia. An example of such case I shall cite in more or less detail, as it has many interesting features. Mr. P. M. M., aged 33, came to see me January 30th, 1911. Family history was negative. He had two attacks of otitis media some years before. On December 28th, 1910, the patient was taken ill with fever (temperature 102°) and general malaise. On January 1st, 1911, he noticed pain and frequency of micturition, with hæmaturia at the end of urination, which continued at intervals during the next two weeks. The week before the patient came to me he had nocturnal incontinence of urine on two occasions. On examination, on January 30th, 1911, that is, one month after the onset of the symptoms, I found a posterior urethritis, bladder normal, left epididymitis, and a slight temperature. The epididymitis cleared up in a few days, to return on the right side, and then in a few weeks to migrate back to the left side. The urine was negative for the gonococcus and the tubercle bacillus. The organism isolated from pus was very similar to the diphtheria bacillus. The feature about the case was the onset of the posterior urethritis, with hæmaturia and without involvement of the bladder.

The anterior urethra is at times the seat of the bleeding, but the history makes the diagnosis positive.

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SHIPS' SURGEONS AND MEDICAL INSPECTION OF IMMIGRANTS *

By J. D. Pagé, M.D.

Chief Medical Officer, Port of Quebec; Medical Superintendent, Quebec Immigration Hospital.

The medical inspection of immigrants must be considered, in the present evolution of Canada, as a problem of capital importance from a public health point of view. While the general medical health officer devotes his attention to the conservation and the improvement of the people by preventive means and the multiplication of the fit, a more direct, and hence, the heavier responsibility of the control of the unfit among the newcomers rests upon the medical inspectors of immigrants.

For the information of the many who are not familiar with the routine of the work and the difficulties at the immigrant's landing stations, as well as for the wants of discussion, it may be well to give, first, a summary of what has been accomplished since the enactment of the Immigration Act in 1903, when the undesirables did not meet any barrier before reaching those isolated posts of inspection at our seaports.

It is notable that during the first couple of years of our restrictive laws, 80 to 90 per cent. of the detentions and rejections were due to eye troubles, mostly trachoma, among the Continental people, who were at the time about the exclusive inmates of the detention hospitals.

In those days the inspection was performed at Quebec by two physicians only, going one at a time to every alternate ship.

However, the steamship companies soon learnt that it was their interest to have their passengers examined on the other side, as to the eyes at least, when we were beginning, ourselves, to realize that too exclusive attention had been given to the foreigners and their eyes.

A third medical inspector, and soon after, a fourth one, were added to the initial staff, and a rotation was arranged, by which each of the four physicians would go to three ships out of four, one being detailed to the examination of the second cabins on board, while the two others to the steerage passengers ashore, one of the latter looking specially after the eyes, and the other observing the general condition of the individuals:

* Read before the Canadian Public Health Association, Dec. 13th, 1911, Montreal.

When you are told that two and three thousand immigrants, and occasionally a much larger number, are examined in a single day, you will understand that the inspection cannot be but a cursory one, during which the suspects are put aside and re-examined after the file inspection is finished.

As a first consequence of a more systematic inspection and the gradual training of the medical officers, more and more mental and physical defectives were detained from all races and classes. Another result was the greater care in the inspection on the other side by the transportation companies, which felt that they had to keep pace with our progress.

You will find the extension of our work, abroad and at home, fully described and appreciated in the annual reports for the years 1909 and 1910 of Dr. Bryce, the Chief Medical Officer of the Interior, where it is also remarked that the larger the number of immigrants the less is the relative number rejected, probably because at times the physical capacity of the inspectors is taxed beyond the limits of highest efficiency.

As a certain number of deportations for medical causes, ordered soon after admission, seemed to justify this statement, two new inspectors were added to the Quebec staff at the beginning of the season just expired, thus enabling us to have a double set of inspectors of three men each, so that each set having to attend to every alternate ship, the work becomes much easier, and proves in the end to be more effective.

So far as I am informed the deportations, after admission at Quebec within the corresponding period of last year, have been reduced appreciably, while the fewer general detentions demonstrate that the inspection at European ports has also improved in a marked degree. We may now quite safely say, with Dr. Bryce, that the approximate maximum of efficient work at the seaports under existing methods of inspection and the requirements of the Act, has been reached.

True as this may be, there will be yet a certain number of mentally or physically diseased persons that will slip through our hands, to be detected soon after landing and deported from various points of the interior.

How can we prevent these accidents? My experience during the several years of my connection with the Port of Quebec has convinced me that the best filter to oppose to the penetration of the undesirables into the country will be found in the Ships' Surgeons service, so soon as it is organized on some reasonable and systematic basis.

I want no other guarantee of the truth of this statement than

the excellent work done by a few able, tactful and courageous ships' surgeons, whom, not for the sake of the petty salary they get, but for particular reasons, we not unexceptionally find on the ships.

The difficulties of the selection of what has been called "the building materials of the nation," and the necessity of bringing into action every available factor to attain this end, have been forcibly put forth by such an authority as Sir James Barr in his lecture on the "Medicine of the Future" at the last convention of the Canadian Medical Association, when he said: "You have got here a young country, a virgin soil, and you should see that it is peopled by a vigorous and intellectual race. You should shut out all degenerate foreigners as rigidly as you would exclude a mad dog." Then follow statistics on tuberculosis, insanity and mental defectiveness in England and Wales, Scotland and Ireland, where we are naturally looking for our biggest supply of immigration.

"During the last fifty years the insane population of England and Wales has increased 250 per cent., while the whole population has increased only 81.6 per cent.; and in Ireland, with a falling population, the increase has been about 100 per cent. The ratio of the insane to the general population is, in England and Wales, 1 in 278, in Ireland, 1 in 158, and in Scotland, 1 in 256. This is not all, as there is an even greater number of mental defectives in the three countries." Speaking of the idiot, the same author states that "there are some 150,000 (estimated) of these defectives in England and Wales, and for every defective there are from six to a dozen of his relatives only a shade better than himself. Practically the same holds for insanity."

Here, when we hold one of those defectives, we have from six to a dozen of solicitors to demand his release, and, if they happen to pass, accidentally, more denunciators.

Inasmuch as the ships' surgeons are required to comply with one of our most important regulations, to which so many fail, with regard to reporting on their certificates every case coming under the law, and after due inspection of each individual, whom they are at leisure to see during the voyage, they should no longer continue to exist on the ships, apparently, as a legal requirement imposed upon the steamship companies, and often without consideration for the security of the passengers.

No innovation or modification of any existing method of inspection on either side of the Atlantic will ever accomplish the

equivalent of what the general ship's surgeon is in a position to do, if qualified, and if he lives up to his obligations.

As public health men, some of you are in the occasion to see many a man and woman who would have been debarred from admission had our inspectors had the same opportunity as the ship's surgeon to size them up. But, because they are not actually a burden to the state, we cannot touch them, though it is apparent that if not directly themselves, they will, sooner or later through their progeny, exert a deteriorating influence upon society.

While we not infrequently come across cases revealing the most shocking ignorance, negligence or absence of common sense upon the part of some ships' surgeons, I wish to declare most sincerely that, in speaking as I do, I have no intention to reflect upon them as a whole not being individually qualified, but their deficiencies seem to come mostly from the fact that they are not trained to this kind of work, and not sufficiently informed as to their particular duties by pursers or captains. They come on a ship for a casual and cheap trip across the big pond, and leave it without having realized their responsibilities, if things happened to have gone for the better in the course of the voyage.

During the seven months of navigation on the St. Lawrence we have had last year 96 different doctors on 36 vessels; this year 106 on 44.

The small fees of $35.00 to $50.00 per month assigned to ships' surgeons explain sufficiently these frequent changes, which render quite vain any hope of amelioration of the inspection on the ships so long as the same conditions prevail.

On asking one day an important official of a steamship line if they could not afford to pay decent salaries to their doctors, I was answered that "as business men they did not see why they should, inasmuch as they always had more applications from doctors than there were positions to fill." This was a reminder that corporations have no soul.

However, believing as I do, if we are public servants, for all that, as medical officers, we are not mere passive instruments, but we must feel it is our duty to be rather instrumental in inspiring the powers to adopt, as occasions require, such measures by which the community at large will be benefited.

In the present case, it would seem that the first step to take with a view to remedying an evil bearing in itself consequences of national importance, would be to persuade the steamship com-

panies to pay their ships' surgeons such salaries that would be an inducement for men of recognized qualifications to enter into the service for a period of at least one year, with a scale of rise for a certain number of years as an encouragement for them to remain with the companies for a longer term, should they choose.

Italy seems to have been the first country that had at heart to impose, some ten years ago, upon every ship carrying immigrants, selected medical men for the protection of its citizens, in the person of a Royal Commissioner, who must belong to the Medical Corps of the Royal Navy in active service, and who, besides his sanitary duties, is entrusted with the overseeing of the emigration interests. They are paid out of an Emigration Fund, and there is one surgeon for every seven hundred passengers.

This policy of Italy has been so satisfactory that it has been adopted since by the Argentine Republic and Portugal.

While it may take some time yet before we can borrow surgeons from a Canadian Navy, and while we have no Immigration Fund at our disposal, I shall conclude in suggesting, in the meantime, the resorting to a means which would not affect the dividends of the shareholders of the companies, by raising the passage rates of 1 or 2 shillings, if necessary, and while this trifling increase could be considered as a cheap insurance for the passengers to insure effective medical assistance in case of want, the total sum should be amply sufficient to give to a ship's surgeon an initial salary not inferior to $1,000 per year.

After all, this means would be only the repetition of the procedure adopted by the Conference of the Transportation Companies some months ago, when they had to overcome their first troubles with the dock employees at Liverpool, when the rates of the cabins were increased by $2.50.

If this expedient was deemed necessary to protect some material interests at the time, how much more justifiable would not be the imposition of a bagatelle of a couple of shillings, in view of the public health.

REPORT ON A CASE OF NASAL DIPHTHERIA

By N. A. Christie, M.B., Webbwood, Ont.

J. B., 17 years of age, was first seen by Dr. G. F. Jones on July 30, 1911, and the case diagnosed as diphtheria. Four thousand units of diphtheria antitoxin were given. Dr. Jones, to whom I am assistant, asked me to see the case on July 31st, and from that time on I followed it.

The patient was extremely pale. From the anterior nares there issued a sanguino-purulent discharge. Cellulitis was so great about the angle of the right jaw that it was pushed forward to such an extent that the upper and the lower sets of teeth were not in line. The breath had a heavy, stale, offensive odor. The mouth and throat contained much mucus.

On looking into the throat the posterior pharyngeal wall and part of the tonsils and uvula were seen to be covered with a thick greyish adherent membrane. On looking through the anterior nares what seemed to be the ends of membranes could be seen. Nasal breathing was obstructed, but the patient breathed easily through the mouth. During the day of July 31st ten thousand units of diphtheria antitoxin were administered. Gargles and sprays were used to cleanse the nose and throat. On August 1st, the patient's condition showed some slight improvement, and four thousand units of antitoxin were given, thus making in all eighteen thousand units.

On Aug. 2 the patient felt much better, and the cellulitis was markedly reduced. On Aug. 4th the membrane was seen to be loosening in the throat.

On Aug. 5th I was summoned to come in a hurry, and found profuse hæmorrhage from the nose, chiefly from the right side. The patient was asked to clear the nose, and on blowing it there issued from the right side an almost complete membranous cast of the nostril. This I examined and found very tough, and almost an eighth of an inch in thickness.

Having tried without avail the usual methods of checking the hæmorrhage, I inserted into the nostril a long, narrow plug of cotton, which had been dipped in a weak solution of tincture ferri-perchloride. This was removed on the following day. Some time during the night of August 5th a similar membranous cast was expelled from the left nostril.

The patient showed marked daily improvement, and on Aug. 10th was anxious to be up. Owing to the severity of the case and the continued pallor, he was asked to spend most of the time in the horizontal position. This he did not do.

On revisiting the patient August 18th, his heart was found irregular in rhythm and frequent in rate. Pharyngeal paralysis was commencing.

The patient was now kept in bed and strychnia sulphate gr. 1-40 was given three times a day. On August 24th the heart's rhythm was regular, but pharyngeal paralysis was increasing, and food was swallowed with difficulty.

At this time I left town for a week, and Dr. Jones attended the case. The patient developed a severe cough, and on examination Dr. Jones found râles in both lungs.

On my return I again saw the patient, on Sept. 8th, and on examination found coarse râles in both lungs. The patient coughed much each time he swallowed, and I suspected that particles of food were entering the bronchi. He now complained of double vision, and also of a numbness of the arms and legs. The legs and arms became almost powerless, and he could not walk.

As almost all food, fluid as well as solid, was regurgitated, the stomach tube was passed three times a day, and through it food—consisting largely of milk, egg, beef tea and ground biscuit—and medicine—strychnia, syr. ferri iodidi and brandy—were given.

The patient's condition at once commenced to improve. Color returned to his face. In six days the pharyngeal paralysis ceased almost instantaneously, and the stomach tube was no longer needed. Râles were no longer heard in the lungs, and the cough was absent. He continued to gain in weight, and about the end of September the diplopia disappeared almost as suddenly as had the pharyngeal paralysis. During all this time the patient could move his limbs but little, and the muscles became flabby. To prevent this the muscles were kept contracting by the electric current. This condition prevailed throughout October, but early in November the limbs regained their power with the same startling rapidity as did the pharynx and the eyes.

For a time the patient had to be supported by his friends when he walked, but now, after a lapse of almost four months (from the beginning of the disease) he walks and feels as well as ever.

MEDICAL THOUGHTS, FACTS, FADS AND FOIBLES

By James S. Sprague, M.D., Perth, Ont.

The wisest and the very best thinkers among us have erred—and most grievously, evincing blindness and nescience, which, when named, encourage us to believe not in princes in wisdom, but to ordinary men who form conclusions and claim prescience of events and interests that in the great swirl of time have presented themselves, or may, or are to appear. To a greater and better understanding of any study, its past history is necessary to be understood; and as to its future bearings of drift, much will depend on the weight of its present and past records—thus, many wise men, in these our times, and in the memory of history, with all these studies, have lived to learn that their forecasts became unfulfilled—but history reluctantly records the names of those whose predictions were never realized, and apologies are not easily, if ever found. The forecasts of medicines as ascribed to Oliver Wendell Holmes, the distinguished Professor of Anatomy at Harvard, have not been fulfilled, and so obnoxious were these statements and forebodings that his name was threatened removal by the medical faculty. Yet he, the author of "Autocrat," made amends in his literary works, rendered classical by his medical attainments. However, he or his equals—ensconced in the seats of the mighty have had no privileges to cast reproach on the profession—for we never needed and do not need volunteers of this order in our ranks. It is needless to name the obnoxious sayings of Sir Frederick Treves, whose honored name was, to a great extent, very much humbled in the estimation of our fellows, but hallowed by medical nihilists.

Our own Drummond, a follower, like Holmes, of the great Grecian God, Apollo, the protector of medicine, and art and music and poetry, in his "Doctor Hilaire" added no honor to his profession; yet to me his apology was, as we discussed its merits and demerits before publication, that such a character could not, in a moral and enlightened community, be tolerated or have an existence; yet, from my own observations I gave him several illustrations and with proofs that there are *Doctor Hilaires* in many Ontario municipalities, who are patronized by the clergy and the intelligent, if such they are, of the churches and society.

My friend, and your friend in his "The Canadian Country Doctor" and "Le Docteur Fiset" has made the *amende honorable,* yet, had he been continuously in practice and not influenced by mines and stocks and had known more fully the profession's pulse, "Doctor Hilaire," page 64 of "The Voyageur," would have no record of his *Gilpin* ride. Cicero's "De Senectute" and "Religio Medici" when studied by one of our masters, whose love is that of a poacher in obscure volumes, without considering the results of many present and classical contradictions, gave expression to a sentence, that when studied, had been often said and unchallenged, and when medicine had no "Emmanuel movements" and other Nihilists, yet it took many moons and many intelligent men to explain the error of public interpretation—and perscrutation reveals that on the palimpsest the words are fading. Yet medicine for a time suffered, and quackery and ignorance screeched—and even now we hear their reverberations. Yet by his works our master is justly claimed by us a "Master Mind," and a "Father in Medicine."

"Then do we sin against our own estate."

To the pleasure of the scandal-mongers and their low-bred fellows, many public press invectives, medical or ecclesiastical, from time to time, appear, and one fact is, neither profession is honored thereby; yet of the two, the church shows too much the cloven foot, its tentacles more for power than for souls, the result being that unbelief and doubt follow, and the public is led to think there is more "faith in honest doubts than in half the creeds," and the "Rev. Doctor"—who has obtained the doctorate at some cheap and correspondence school or college—*national* or *central,* etc., figures as authority, and the result is, either he gets an ephemeral notoriety or another pulpit with enlarged stipends. Not so the doctor, who in other than his journals, seeks notoriety, for his professional honor is often besmirched thereby—and with attaint his name and his works forever become associated. Gladstone has said that we "are to become as a profession the future rulers of nations," and indications lead that way, but as he erred in his statement that Jefferson Davis had made a nation, we want better confirmation of our future. De Toçqueville predicted that America would becomes "the homes of those of moderate wealth, evenly distributed." Lord Salisbury predicted a united Germany as an impossibility, or rather an improbability. Lord Granville, on the day preceding the outbreak of the Franco-German war, declared that peace was

assured—even when it was known that Napoleon III was an invalid—hopelessly so—and on a tottering throne—and yet considered a formidable and dangerous man. We as a people and as a profession are obsessed by bogies and nightmares unworthy of our times.

We who may be the possessors of all learning and ranked with those gigantic geniuses "who are fit to grapple with whole libraries," meet on the level with those less studious or cultured, whose judgments, discernments and personalities are not warped by excessive study of authorities, hence, leaders of men they become, in new thoughts and in all worthy and progressive movements to the glory of medicine. We, too, if in any sense observing, learn, too, and with much sorrow that

> "Our wills and fates do so contrary run
> That our devices still are overthrown,
> Our thoughts are ours, their end not of our own."

If we are obsessed by the furor of the expression of our thoughts, however flowing the pen, however full the ink horn, however well we consider our words blended with the wisdom of our masters, yet it is well to employ care for the publication, for we can rest assured no fraternal thanks need be expected, and as regards the public interpretation the end will not be of our own.

Too often our living masters dazzle our intelligence with the profundity of their views, yet they do not admit or announce that they "weave the cast off ideas of bygone ages into the garment of languages; and by nimble shuttles and the chemistry of time, create a new meaning for words expressive of old theories."

The teachings of the illustrious masters, dead and living, tell us in virile language:

"Be noble and the nobleness in others sleeping but never dead, will rise in majesty to meet thine own," and they do not teach us to say nothing, to do nothing or be nothing—especially in these our times when the credulity of the masses in reference to false cults—encouraged by the church, illiterates and visionaries that walk abroad at mid-day—is in keeping with the words of the immortal Lincoln. Thus it becomes us, however grievous the task, to be our brother's keeper—to learn, to teach, to live, and to teach others how to live, and duties, heaven born, for which our great universities have prepared and are preparing men of the highest culture in medicine. Through the charac-

teristic professional negligence and indifference, owing to the want of defenders of our well-defined rights, and owing to the scarcity of writings or papers in our medical journals, the disciples of baseless cults, including "still" hunters, optometrists, etc., are demanding charters, etc., from legislatures; hence the necessity of your and my opposition, especially at this date—even in the days of a Dominion medical registration—whose records and registers we want not stained. Brothers!

"All *our* strength is in union,
All *our* danger is in discord."

It is well not to worry—for he in the professor's chair—he in the enjoyment of a fine income—he who does not depend on medicine and others of this order care not how the profession may drift or how assailed, but he, the country doctor and his fellows, are sufferers, and yet defenders of our profession, its integrity and its glory. Well, it is well not to worry, let the other brother worry, do and act, for we may console ourselves that we are loyal without works or interests. Yes, and with Sir Dr. Thomas Browne to a greater extent nurse our self glorification—and with his words:

"However weigh not thyself in the scales of thy own opinions, but let judgment of the judicious be the standard of thy merit. Self-estimation is a flatterer too readily entitling us into knowledge and abilities, which others solicitously labor after, and doubtfully think they attain. Surely, such confident tempers do pass their days in best tranquility, who, resting in the opinion of their own abilities are happily gulled by such contentions."

One consolation is, says Chauncey Depew: "Life is full of compromises and they are absolutely essential. No man can live unto himself, and for himself alone"—and not in medical practice or in its service.

THE CANADIAN PUBLIC HEALTH ASSOCIATION

On the evening of December 13, H. R. H. the Duke of Connaught opened the first Congress of the Canadian Public Health Association in Montreal.

Dr. Starkey, the President, in opening the proceedings expressed the great pleasure it gave him to welcome their Royal Highnesses, in the name of the Canadian Public Health Association. The Duke of Connaught, he said, would not only be a patron of the association in the usual sense, but intended to take a very active interest in sanitation, and in the affairs of the association. The First Vice-President, Lord Strathcona, also took a practical interest in the association, and had sent, quite unsolicited, a cheque for $2,500 for its funds, while Premier Borden was the Second Vice-President, and the commission on conservation gave the association its most cordial support.

The primary aim of the association was the diffusion of sanitary knowledge. To this end, they must induce the public to join them, and to take an active part in the work, and get the laymen to co-operate with the professional men who gave their lives to the study of the problems of sanitation.

The Duke of Connaught, who had a very cordial reception, said: "I desire first of all to express my deep satisfaction at being present at this meeting, which has been called to organize the Canadian Public Health Association. Of the many subjects which are awaiting solution in Canada, none is so important to my mind as that of the health of its inhabitants, both adults and infants. It is a subject which affects every one of us individually, and we owe it to ourselves and to the rising generation to see that conditions are improved as far as lies within our power.

Public health is a question which rises above all politics, and it is the duty of the whole nation to join in promoting the objects of the association which is now gathered here.

The urgent necessity for improvement in existing conditions is forced on our attention by the reports of epidemics of typhoid, diphtheria and smallpox which occur all too frequently in the press, and by the study of statistics of infant mortality in your great cities. The aims and objects of this association as outlined by the President are most commendable, and the idea of expanding the membership so as to include all kinds of workers in the domain of sanitation is a wise one, because so many of the general public outside these professional men actually engaged in

sanitation work are becoming extremely interested, and would gladly welcome any means whereby they could learn the better to conserve the public health.

Such information can only be obtained from experts, and it is at congresses such as these that opportunities are given for receiving and imparting instruction. Many of the general public are laboring under the delusion that to avoid epidemics and to bring health into their daily lives they must be equipped with deep scientific knowledge. That is a totally erroneous idea. Profound knowledge and deep research on the part of the scientists are required in order to arrive at logical and exact results in the field of hygiene, but these results and their application to our daily lives are profoundly simple and straightforward.

As an educational movement the association is of paramount importance, for what education or knowledge is so important as that of learning how to obtain health by avoiding and preventing disease, and so obtaining a sound body in which to clothe a sound mind. Thus the healthy upbringing of children in their homes and in the schools is a point of the most vital interest to everyone. This question of the education of children in hygienic matters has been undertaken more or less in most countries, but a great deal still remains to be done in that direction. Attention must be given, not so much to the task itself, as to the general routine of the daily life.

Having secured in this association the means of teaching the public, we have to consider how to apply this teaching in order to get the best value out of it. Everything seems to point to the education of the coming generation as the best field for our energy. While the young are being instructed those of their parents who are desirous of learning will be able to do so, but we shall not waste our time by competing against that obstinacy and apathy which in grown people so often takes expression in the familiar saying, "Let things alone. What was good enough for our fathers is good enough for us."

What was good enough for the last generation is not good enough for the present. On the land where Ottawa now stands Indians were scalping one another a hundred years ago, but who would be so rash as to pretend that sanitary conditions have not changed since then? In those days pure water and pure air were universal in Canada. The growth of the great cities and the settlements has altered this state of things, for the agglomeration of people is inevitably accompanied by the seeds of disease.

While on the subject of crowded settlements, let me say how

glad I am to hear of the garden city movement having been started here in Canada, and I trust it may meet with the success it so richly deserves. To provide decent homes for the people outside the congested districts is a sure step in the direction of the improvement of the public health, and I have no hesitation in recommending the garden city movement most strongly to your favorable consideration and support. It will go far towards minimizing the difficulties on the score of health which are met with in places where the population is increasing at a rate out of proportion to the accommodation provided for them.

Speaking of sanitation in connection with children, the thought naturally arises of the movement started in nearly all countries to reduce the terrible infant mortality which is so prevalent everywhere. It is gratifying to know that this topic, as well as those relating to the hygienic well-being of children, is going to receive the attention of this Congress.

Again, it is a matter of congratulation that among other very important questions relating to the welfare of the people to be discussed are such questions as sewage disposal, the supply of pure drinking water, the housing of the working classes, etc. All these are extremely urgent, and affect the welfare of large masses of the population of Canada. The first two have become so urgent that action of some kind is contemplated both by the Federal and Provincial Governments, judging by the questions brought up in the legislatures, and doubtless anything tending to the solution of these problems that may be brought out of this meeting will be available for the benefit of these legislatures.

We must make it an object to impress on the public the necessity of obtaining health by the prevention of disease and not by its cure. Under the heading of preventive medicine comes vaccination and other forms of inoculation. I know that vaccination has many antagonists, and I have no wish to enter into any argument on the subject. I will confine myself to the simple statement of the fact that in the cemetery of Gloucester, in England, lie the bodies of 276 unvaccinated children, who died during the smallpox epidemic of 16 years ago. Only one vaccinated child lost its life in the same epidemic.

It is only when the people have thoroughly grasped the full meaning of any movement that legislative bodies can begin their work. Legislation, without the intelligent support of the public, is useless, and it would be wise for all of us to appreciate the fact that legislation in respect to sanitation is honestly intended for the benefit of us all, both individually and collectively.

Such being the case, we ought to give our full support to the authorities administering the laws. Here, as in most countries, there are laws designed to protect the workers in dangerous trades, but the vast majority is left to look after its own health. It rests with them to protect themselves against the ravages of disease.

I now have great pleasure in fulfilling the mission with which I am charged this evening, namely, that of inaugurating the Canadian Public Health Association, and in declaring this Congress open. In concluding my remarks, I wish you must successful results from the work you have undertaken, and I trust you will be able to provide the necessary impetus to this movement, which is designed to bring about the permanent amelioration of the conditions of the public health in this great Dominion.

Premier Borden, in expressing his entire sympathy with the objects of the association, said that it seemed to him that, under present conditions, there was no more worthy work that could engage the attention of good citizens than that of the improvement of the public health. He did not think that as much had been done in this direction in Canada in the past as ought to have been done. It was true that a branch of the Department of Agriculture was organized for the purpose of attending to public health matters, but he did not think the Federal Government had done so much as it should in this direction. In the matter of public health, Canada had muddled through somehow, but it ought not to leave the question to haphazard any longer. When it was considered how much of the energy of the people and the nation was dissipated by disease, simply through drinking impure water, and by neglect of sanitation, they would realize that from the standpoint of national efficiency, this subject should be dealt with in an effective way.

Speaking as far as he was entitled to speak for those responsible for the administration of the affairs of Canada, he declared that they proposed to give this matter their most earnest attention, as far as lay within the purview of federal ministers.

He particularly instanced the need of joint provincial and federal action without delay to prevent the pollution of water supplies.

Mr. Martin Burrill, Minister of Agriculture, in cordially supporting the objects of the Congress, said it came as something of a shock to find that in this country of illimitable spaces, the evil of overcrowding had already produced slums. He thought some of this was due to laxity in immigration matters, remark-

ing that while the people of Canada rejoiced at the large immigration into the country, they had not realized that only a small proportion went into the open spaces, and that the portion hardest to assimilate, and which had least regard for the laws of sanitation and hygiene, had drifted to swell the city life, and make congestion in the big cities.

"It is time for men like us," he remarked, "to brag less of the natural resources of the country and its material advance and to have a greater pride in civic virtues."

Emphasizing the fact that he spoke unofficially, he declared that he thought the time had come when, if there was not the creation of a separate portfolio for dealing with public health matters, there ought, at any rate, to be a full-fledged department for the purpose in connection with the Federal Government.

Sir Lomer Gouin spoke of what had been done, and was still being done in the Province of Quebec for the improvement of the public health. He said that in connection with the Provincial Bureau of Public Health, it was now the purpose to divide the Province into ten districts, each of which was to be in charge of a fully qualified hygienic expert, elected by competitive examination at the English and French universities. Courses for these appointments were already being taken at the universities.

He also spoke of the Royal Commission appointed to inquire into tuberculosis in the Province, and said when that Commission gave its report it was proposed to build a provincial hospital for tuberculosis cases.

He referred to the appalling infant mortality of the city, and expressed the hope that a league for the defence of children would be formed. In this connection he welcomed with all his heart the coming Child Welfare Exhibition.

Mayor Guerin heartily endorsed Sir Lomer Gouin's remarks regarding the death rate in the city, while Dr. Montizambert spoke of the progress which had been made in hygiene since he took up the matter in a public capacity as long ago as Confederation.

Selected Articles.

ANAPHYLAXIS

By Prof. G. Meilliere, M.D.
Member of the French Academy of Medicine.

The term anaphylaxis (from the Greek word "to protect against") was introduced in 1902 by Professor Charles Richet to describe the property possessed by certain poisons of creating a peculiar sensibility on the part of the organism towards themselves under conditions that would lead one to anticipate a sort of tolerance or immunity.

It was shown by Ch. Richet and Portier in 1902 that a quantity of a given substance which would not cause any disturbance in a normal animal may precipitate symptoms of extreme severity in an animal that has received an injection thereof some time previously.

It was in the endeavor to establish the toxicity of the tentacles of the starfish that Richet had occasion to renew the injection in animals that had survived a first, non-lethal injection, whereupon he obtained this paradoxical result, that a dog which had been given a first injection of 0.1 c.c. of the glycerine maceration without falling ill was killed by a second injection of the same amount twenty-two days later, and that within half an hour. This effect could not be due to accumulation because anaphylaxis is not present during the first four or five days, and takes two or three weeks to develop. Cumulative injections before that time, far from provoking anaphylaxis, hinder its evolution.

For the phenomena of anaphylaxis to be manifested there must be (1) enhanced sensitiveness to a poison by a previous injection of this same poison, and (2) a period of incubation for this exaggerated sensitiveness to be produced.

Had certain data long since placed on record received proper attention, the existence of the phenomenon now known as anaphylaxis would have been inferred at a much earlier date. Magendie, for instance, as far back as 1839, noted that rabbits, after a first injection of albumen, were unable to withstand the same dose a few days later. Behring, in 1893, had remarked that

guineapigs sometimes displayed remarkable sensitiveness when given a second dose of antidiphtheric serum, while Richet and Héricourt, in 1898, in their investigations on eel serum, found that the second, and *a fortiori* the third, injection caused the death of the animals.

Prof. Ch. Richet has summed up the characteristics of anaphylaxis as follows: (1) A certain period of incubation is necessary for anaphylaxis to develop. (2) The state of anaphylaxis may persist for several weeks. (3) We may get immunity and anaphylaxis at the same time. (4) Anaphylaxis is in some measure specific—*i.e.*, the second injection must be of the same nature as the first. (5) The symptoms of anaphylaxis are immediate and crushing, while the symptoms of primary intoxication are slow to be produced. (6) The anaphylactising substance is thermostable. (7) The anaphylactic poison exerts its effects on the central nervous system, and the characteristic manifestation is prostration of the nervous system with marked lowering of the blood pressure.

Subsequent researches show, moreover (1) that several injections of normal serum will determine anaphylaxis so that no toxin is necessary for its production. Anaphylaxis is consequent upon the injection of non-toxic inoffensive substances, provided they are albumenoid. (2) The accidents sometimes met with in man consequent upon serum injections are anaphylactic. (3) A single injection of antitoxic serum induces anaphylaxis for a subsequent injection of normal serum even in very small doses. Normal serum, in fact, has exactly the same effects in this direction as antitoxic serum. (4) The anaphylactic state may be caused to disappear by intercurrent injections; this constitutes anti-anaphylaxis. (5) Animals inoculated with a given microbe are anaphylactised by the corresponding toxin in a strictly specific manner. (6) The phenomenon of anaphylaxis is sufficiently specific to enable us from a medico-legal point of view to determine the kind of animal whose blood has been injected. (7) There is such a thing as passive anaphylaxis—*i.e.*, the blood of anaphylactised animals, if injected into normal animals, confers anaphylaxis after a large number of injections, sometimes indeed after a single injection. (8) Anaphylaxis may be induced *in vitro* by mixing the serum of anaphylactised animals with the antigen (which has previously provoked the anaphylactic condition). The injection of the mixture sometimes determines overwhelming anaphylactic accidents. (9) There is a relationship between the production of the anaphylacting toxigen, the for-

mation of precipitine and deviation of the complement. (10) Animals sensitized by an anaphylacting substance are, to some extent, rendered sensitive to all poisons, even the crystalline ones.

It naturally occurs to one to seek to discover in the anaphylactic process an explanation of all the natural and acquired permanent or fugitive hypersensibilities revealed not only by experimental physiology, but by daily observation, in alimentary hygiene and therapeutics. The phenomena of idiosyncrasy or individual predisposition present certain characters approximating those of anaphylaxis. By assuming the existence of an exaggerated sensitiveness, not absolutely specific, transmitted by heredity, the occasional production of anaphylaxis by the ingestion of food and the prolonged subsistence of this state, we should have a plausible explanation of what used to be called idiosyncrasy—*i.e.*, the different sensitiveness of each individual to toxic actions. Just as we have a psychical individuality in virtue of which we are ourselves and not anyone else, so we have a humoral individuality which differentiates us from all others, and this individuality of our humors, says Professor Ch. Richet, is due precisely to multiple ingestions and intoxications.

Passing over the various food stuffs (fish, eggs, pork, game, horse flesh, strawberries, asparagus) and certain drugs, it should be remarked that some of these fail to conform to our definition that anaphylaxing substances are necessarily albumenoid. This formula, which is rather too strict, should be enlarged in the following sense, *viz.*, that the introduction of a heterogeneous element provokes modifications of metabolism of proteid substances equivalent to the introduction of a heterogeneous albumenoid.

Alongside medicinal idiosyncrasies come the phenomena observed in connection with medicinal and microbial serums employed for like purpose. Serum anaphylaxis has been observed ever since the serum of immunized animals began to come into use. While the first injection is well borne, apart, it may be, from a little erythema or fugitive urticaria (10 per cent. of the cases) the second injection when made after the lapse of a period which corresponds to the incubation period of anaphylaxis (three or four weeks), may determine a local and general reaction capable of acquiring a very grave significance.

There are two types of serum reaction which may occur separately or may be more or less associated—one purely local at the seat of inoculation, or a constitutional reaction of the urticarial type.

At the onset of his researches on anaphylaxis Prof. Ch. Richet pointed out the analogy between anaphylaxis and the sensitiveness of tuberculous animals to tuberculine; but further investigation showed that there are certain points of difference. For instance a first injection of tuberculine does not appear to sensitize normal animals to a second injection, and the blood of tuberculous animals does not always confer passive anaphylaxis. Lastly, the anaphylactic reaction is generally hypothermic, whereas the injection of tuberculine in the tuberculous always cause the temperature to rise. This was the state of affairs between 1902 and 1908.

Subsequent researches have shown that tuberculine behaves like an albumenoid antigen provoking the anaphylactic state. Decisive experiments have been carried out under such strict conditions which differ from the simple univocal technique of the early researches on anaphylaxis. However this may be, the intense reaction of the tuberculous to tuberculine is unquestionably due to anaphylaxis, whether local (ophthalmo-reaction and cuti-reaction) or constitutional (fever, pulmonary congestion, coma, dyspnœa, etc.). It follows that the causative substance (tuberculine) contains the elements necessary to the anaphylactic reaction, but that this same substance cannot play the part of the preparative body. That is the case with a large number of antigens. In the tuberculous organism the infection causes the production of preparatory substances which do not exist in the tuberculine employed by us, either because these substances do not form as readily in artificial cultures as in the animal organism or because the methods of preparation of tuberculine change, decompose or get rid of the preparatory substances.

Recent researches point to the possibility of controlling the anaphylactic nature of the tuberculine reaction by methods based on the mechanism of passive anaphylaxis, methods which will assuredly one day enable us to carry out an anaphylodiagnosis, the human subject being called upon merely to provide a little of his blood instead of lending himself to experiments which are not free from drawbacks as in the present tuberculine reactions.

Anaphylaxis not only furnishes us with a key of various hitherto inexplicable phenomena, but enables us to regulate certain diagnostic and therapeutical methods. From the point of view of general pathogenesis anaphylaxis seems likely to furnish us with an explanation of certain constitutions such as neuro-arthritism, the subjects of which, so vulnerable from many

points of view, may prove to be subjects anaphylized by a complex or polyvalent antigen thus creating a latent morbidity which may be rendered manifest by some trifling, fortuitous cause.

Now comes the question, how can we avert the accidents ascribed to anaphylaxis? We are aware that anaphylaxis only developes after a certain lapse of time following the injection of a very small dose of antigen or sensitizing substance. On the strength of this observation Rosenau and Anderson have shown that we can protect animals against grave accidents by injecting massive doses of serum. Transporting these conceptions to the therapeutical domain, children already anaphylactized are injected with very large doses of the serum. They avoid the development of anaphylaxis in the normal subject by injecting, to begin with, a large dose of therapeutical serum and repeating this massive injection every five days when required, and this is free from danger since the organism is kept in the preparatory stage. Besredka suggests heating the serum to 56° C. which does not materially affect the anaphylacting substance, but diminishes the toxicity of the serum by destroying the property of letting loose the anaphylacting process.

I may conclude with Prof. Ch. Richet's words concerning the biological role played by anaphylaxis. "An albumen is capable of entering into the normal composition of the cells. Now this is a danger. . . . The anaphylactic reaction is a defensive function having for object to maintain intact and homologous the chemical constitution of each animal species and to prevent foreign albumens being introduced into the protoplasm of the cells, since this would modify the chemical, specific structure of the cells."—*The Medical Press.*

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, F. A. CLARKSON, BREFNEY O'REILLY AND F. C. HARRISON.

The Specificity of Wassermann's Reaction

Scheidemandel (E.). *Deutsches Arch. f. klin. Med.*

During the last 2¼ years the author has looked for Wassermann's reaction in 1,212 patients, of whom over two-thirds gave no signs or history of syphilis, using Wassermann's method and technique. He lays stress on the importance of taking the blood (10 c.cm.) direct from the patient's vein, and not employing blood obtained in small quantities and with difficulty by pricking or blistering the skin; he notes that blood drawn during general anæsthesia may give a positive reaction due to the narcotic, and that blood rich in chyle (as in patients on a milk diet) is unsatisfactory to use. The blood from marked cases of jaundice cannot be employed at all, as it always (11 cases out of 11) gives a strongly positive reaction; the reaction was negative in 3 patients with slight jaundice. Scheidemandel counts complete or almost complete inhibition as indicating a strongly positive reaction; incomplete inhibition as weakly positive; almost complete hæmolysis as doubtful. In only 7 cases did he find a strongly positive reaction that could not be explained by either self-inhibition or syphilis. An incomplete reaction, such as is often seen in tabes or in well-treated syphilis, may be found in severe wasting diseases and in any acute fever; a negative reaction occurring when the fever is over—this is true of scarlet fever just as it is of other fevers. Discussing the border-line cases, where an incomplete reaction is found, or a reaction positive and negative on alternate days, the author lays great stress on the importance of using an uniform technique and standard materials: the total volume of the re-agents should be 5 c.cm., not 2.5 c.cm. (=0.2, not 0.1 c.cm. of the patient's serum): in doubtful cases the test-tubes should be left more than 2 hours in the incubator: the results should be noted in 4-6 hours as a rule, but in doubtful cases only after 12-20 hours: extracts of

syphilitic organs give fewer doubtful reactions than extracts of normal organs: and a standardized antigen should be used—such is supplied by Messrs. Ganz of Frankfurt a. M., acting under Wassermann's direction.—*The Medical Chronicle.*

The Albumin Reaction in Pulmonary Tuberculosis

Roger and Lévy-Valensi. *La Presse Médicale*:

The article is written with a view to summarizing our knowledge of the subject first introduced by these investigators.

The objections raised (1) that the method of examination is too cumbersome for clinical purposes, (2) that putrefactive changes in sputa occasion the presence of albumin, and (3) that sputum in general contains albumin, are dealt with, and the writers conclude that they are groundless.

The fact that albumin is present in the sputum in cases of pneumonia, acute pulmonary congestion, passive congestion secondary to cardiac affections, and pulmonary œdema, following nephritis, was fully recognized in the original article.

Reviewing then the observations of others up to date, they come to the conclusion that since the albumin-reaction becomes more frequent according as the diagnosis is more probable, a repeated positive result even if it does not acquire the value of a certainty, is at any rate strong presumptive evidence.

Compared with other reactions, *e.g.*, Pirquet, Calmette, it would seem to be more reliable and in addition is inoffensive.

Its disappearance with an established cure of the disease, and the apparent fact that a relative increase of serum-globulin over serum-albumen is present in the more chronic forms of the disease, leads one to hope that the test may be of distinct prognostice value.—*The Medical Chronicle.*

Auto-Serotherapy in Sero-Fibrinous Pleurisy

Maillet (F.). *Gaz. des Hôpitaux*: Since the introduction of the method of injecting subcutaneously 2 or 3 ccs. of the fluid withdrawn from the pleural cavity, many observers have recorded their experience, some favorable, and others the reverse.

Collecting the cases the writer finds 155, of which 132 showed a completely successful result, i.e., 85 per cent.

Clinically one notes that a diuresis is the invariable consequence of the injection. In favorable cases this leads to a resorp-

tion of the pleuritic fluid, but even after repeated injections resorption does not always follow.

There is general agreement that the best results are got in the cases of recent acute pleurisy, but the opponents of the method argue that these are just the cases to expect spontaneous absorption of the fluid.

Absorption of the extravasated fluid seems to take place more rapidly after injection, being complete in 7 to 30 days, and is most manifest in young subjects.

Occasionally after the injection there is abundant perspiration and some feverishness.

Various theories have been suggested to account for the favorable influence of the injection. One regards it as a specific reaction producing immunity; another as a diuretic influence; whilst a third attributes the action only to the mechanical withdrawal of a portion of the fluid. The constant occurrence of a diuresis, even without absorption of the fluid in some cases, is evidence against the purely mechanical theory.

In practice the writer recommends the withdrawal of 20 to 50 ccs. of fluid from the pleural cavity, along with the subcutaneous injection of 2 to 5 ccs.—*The Medical Chronicle.*

Serum Diagnosis of Epidemic Infantile Paralysis

E. Muller (*Deutsche Med. Woch.*): One attack of acute infectious poliomyelitis probably produces immunity. This acquired immunity has been experimentally proved in monkeys, which suggests the presence of specific anti-bodies in the blood. Such bodies have now been demonstrated. A fine emulsion of the central nervous system, to which, as in rabies, the virus is attached, is injected into the brain of monkeys. The animals develop poliomyelitis. But if the emulsion is mixed with an equal volume of the blood serum of an animal which has recovered from the disease and the two are left in contact for a sufficient time, intra-cerebral injection of the mixture has no ill results. This neutralization of the virus by immune serum in the test tube has been proved so often and with so many modifications of technique that no doubt remains. The circulating anti-bodies are probably the cause of acquired immunity. They are not, however, the cause of congenital immunity, because the blood-serum of such naturally immune animals as horses, rabbits, and fowls has no power to neutralize the virus in the test tube.

The presence of these anti-bodies has also been demonstrated in man after recovery from acute poliomyelitis. Hence arises the possibility of serum diagnosis of the disease. Its value would be great as during an epidemic abortive and aberrant varieties occur, the nature of which can clinically only be suspected. Thus the symptoms may be limited to the pyrexial stage without the occurrence of paralysis, or be mainly or entirely cerebral.

In conjunction with Romer the writer proved that these anti-bodies never occur in persons who have not survived acute poliomyelitis, but are constantly present in the blood for years after an attack. The technique of the serum test is as follows:—A 5 per cent. emulsion of a central nervous system containing poliomyelitis virus is freed from the coarser particles by filtration through blotting paper. It is then mixed with an equal quantity of the serum of the patient to be tested. The mixture is first kept at 34°C, and then left in a refrigerator or at ordinary temperatures for many hours. From 0.6 to 0.8 c c. of the mixture is then injected into the brain of a normal monkey. A control experiment is made by mixing the same quantity of active virus with the serum of an individual who is certainly not suffering from poliomyelitis and injecting the mixture into the brain of a healthy monkey. The control animals sicken with poliomyelitis, but if antibodies are present in the serum, the test monkeys are unaffected.

As to the abortive forms of acute poliomyelitis, the writer recently saw a case in which 3 children of the same family were attacked by the acute gastro-intestinal disorder which frequently ushers in the disease. One child developed typical anterior poliomyelitis, the second merely lost the tendon-reflexes of the lower limbs, and the third presented no nervous symptoms whatever. Transitional forms between the abortive and fully developed disease include the pontine facial paresis, which develops during a feverish attack and frequently remains the only definite symptom of epidemic poliomyelitis. It may, however, be followed by other bulbar symptoms, with paralysis of deglutition and respiration, and often proves fatal. These abortive cases, if unrecognized, cause the epidemic to spread and often give rise to cases with typical paralysis. If the patient survives he is immune. This was proved by the writer and Romer by the serum test in an abortive case. Conversely, if the test proves negative, the suspicion of epidemic poliomyelitis may be dismissed. The test also proved the origin of an old case of cerebral infantile paralysis to be poliomyelitis.

Some authorities claim that sporadic infantile paralysis is a disease quite distinct from epidemic poliomyelitis. But the test has demonstrated their identity. For, in a case of sporadic infantile paralysis, the writer found that the serum of the patient neutralized the virus of epidemic poliomyelitis six years after recovery from the attack. Similar results were obtained in France by Levaditi and Netter. The test is capable also of showing the ætiological identity of epidemics far apart. Thus antibodies obtained in France were found to neutralize the virus of the most recent Austrian epidemic.

The serum diagnosis of poliomyelitis is, at present, only of limited application owing to technical difficulties and the expense of obtaining monkeys.—*The Medical Review.*

SURGERY

In charge of E. E. King, G. A. Bingham and C. B. Shuttleworth.

Treatment of Boils with Iodine

L. Shingleton Smith (*Bristol Medico-Chirurg. Jour.*) The writer suffered from an attack of boils, of which he regarded the saddle as the exciting cause, though he was run down at the time. They generally developed one at a time and as soon as one had run its course another was well on the way. They became so bad that he could not ride or even drive. He tried Bier's treatment, applying the cup for an hour off and on morning and evening. He applied the cup when the boil was first recognized and was no bigger than a pin's head, but it had not the slightest effect. The boil continued to grow and in a few days the inguinal glands were affected. The boil reached the size of a small saucer and then gradually subsided, and the slough separated sometimes with a little pus. If the cup was applied in the later stages the induration spread under its edges and the application became most painful. The only way in which the cup seemed to be of any benefit was after free incisions (of which over a dozen were made), when the pus and slough came away perhaps a little more readily than they would otherwise have done. Various other treatments were adopted; but in spite of all—hot Jeyes' baths, sulphur and mercurial inunctions, and tonics—the boils continued to develop.

The staphylococcus pyogenes aureus was cultivated from the pus and vaccine prepared from it. An injection of 20 millions was given and a few hours later an extraordinary reaction, both local and constitutional, occurred. The boil, at that time getting well, became exceedingly tender and more painful than it had ever been, but after a few hours got better again. Next day the writer became ill, and the temperature rose to 103°, but he recovered in the evening. Increasing doses were given once a week and at first slight reactions, both local and constitutional, appeared, but later none. The boils gradually became fewer and less severe, and finally disappeared for 6 months.

During the latter period all the boils were painted with liq. iod. fort. When painted whilst small they withered up and gave no further trouble. If allowed to develop to the size of a shilling,

they spread no farther, came to a head, and the slough separated in a comparatively short time.

After the boils had ceased to come there continued to appear pimples, which soon became pustular, and, under painting, withered up, which shows that the resistance had been increased. These pimples, two months earlier, would have shown no sign of pus, but spread as an indurated phlegmonous mass affecting the inguinal glands. Six months later another boil came in the same region, and presuming that the same organism was at work, an injection of 250 millions was given. At least a dozen incipient boils followed, all of which were painted with liq. iod. fort. and aborted. Whilst the injections were continued, the boils steadily diminished in numbers, and there was no such sudden outbreak as this. It seemed that the immunity acquired had to a great extent disappeared, and that after the large injection a negative phase was manifested by the sudden abundant crop of small boils. Three months later a small boil began, and another three months after that, both of which were aborted by the application of liq. iod. fort.

Although Bier's cupping has been highly lauded in the treatment of furunculosis, the application of liq. iod. fort. proved far more efficacious. For this the writer gives the following reasons: (1) The iodine application produces hyperaemia in the skin and not in the fascia and subcutaneous tissue, as the cup is more apt to do, especially in the case of boils which are situated for the most part in the soft parts, such as the neck, back and gluteal region, where the skin is readily lifted up and drawn into the cup without much stretching. (2) The iodine application is always acting, whether the patient be busy or otherwise. (3) The iodine destroys the germs in the surrounding skin.—*The Medical Review.*

Scarlet Red in Stimulating the Epithelization of Granulation Surfaces

J. S. Davis (*Johns Hopkins Medical Bulletin,* July, 1911. The beneficial effects of scarlet red ointment (8 per cent.) on sluggish and extensive granulating areas were reported by Davis two years ago. His further experiences confirm his good opinion of the efficacy of this remedy. Recently he has tried the effect of amidoazotoluol ointment (8 per cent.) as recommended by Hayward and finds this ointment equally, if not more, effective. The dressing with either of these ointments is simple, non-irri-

tating, and causes less discomfort than other forms of dressing. The use of scarlet red or amidoazotoluol in blue ointment is advantageous for syphilitic ulcers. Davis has never seen a wound healed with these ontments break down. At times it is advantageous to apply either ointment directly to the wound and then expose to sunlight and air. The substances can be used as a dusting powder in four to eight per cent. strength to boric acid. The method of application briefly is as follows: The ointment is applied alternately with some bland ointment every 24 or 48 hours. Anoint the skin surrounding the defect with some bland ointment to within 1 cm. of the edge; then spread the scarlet red ointment in a thin layer on perforated old linen and apply to the wound. If a 4 per cent. scarlet red ointment is applied on partial skin grafts 48 hours after grafting, there is rapid stimulation of the wound edges and also of the grafts themselves.—*American Practitioner.*

The Contagiousness of Cancer

Many arguments have been advanced pro and con in regard to the contagiousness of cancer. A multitude of statistics has been compiled and still the question seems as far from being settled as ever. The subject, however, is one of such vast importance that it appeals forcibly not only to the medical profession, but to the laity. For, if there is the slightest reason to believe that the cancer patient may be a source of contagion to his family, the sooner this is definitely determined the better, so that proper precautions may be adopted.

When it is realized that a considerable number of medical men, among them some of great prominence, uphold the theory of the contagiousness of malignant growths, it is folly to ignore such a possibility. Some statistics recently published by the Institute for Cancer Research in Heidelberg, which is under the direction of Professor V. Czerny, a very high authority, are of much more than ordinary interest. Dr. R. Werner (*Munchener medicinische Wochenschrift*), to whom was entrusted the preparation of the report, has presented a number of very instructive observations. In Baden, to which this investigation was confined, it would seem that there are certain districts in which cancer is quite prevalent, while in others it is more rarely observed. In the south, for instance, it occurred most frequently, in the north less so, while in the central parts it was least com-

mon. Differences of soil, climate, mode of living, social conditions, occupation, race, age, sex, appeared to exert no influence in this respect. There was a notable increase in the number of cases of malignant disease of the gastrointestinal tract, a valid argument against the doctrine of contagiousness. The view still largely entertained that the greater prevalence of cancer is to some extent attributable to the increase in the number of persons hereditarily predisposed was shown by these painstaking statistics to be absolutely without foundation. Further, no evidence could be obtained to substantiate the view that personal contact can be held responsible for the transmission of the disease, even in married people where both are affected; the different localization of the malignant process in such cases alone rendering this extremely improbable. Another striking argument against such an occurrence is the fact that industrial communities where people are brought closely together were found to be relatively free from cancer.—*International Journal of Surgery.*

LARYNGOLOGY AND RHINOLOGY

IN CHARGE OF J. PRICE-BROWN.

Asthma in Relation to the Nose

Melville Jay (*Australian Medical Gazette*, May, 1911). The writer claims that between 30 and 40 per cent. of all cases of asthma are either caused by, or have direct relation with, certain abnormal nasal conditions. In the majority of cases there is present a hyperæsthetic area usually situated upon the septum. The bulbar nuclei of the fifth nerve are anatomically connected with the vagus, and in this way nasal irritation may excite reflex phenomena in the respiratory tract. Many of these cases can be cured by intra-nasal treatment. Sometimes areas are treated by electro-cautery, and in cases of nasal polypi, the underlying bone cells require to be removed, to prevent recurrence of the polyps and to induce permanent relief from the asthma.

The Visual Fields in Anterior and Posterior Nasal Sinusitis

G. F. C. Wallis, in recent issues of *The Journal of Laryngology*, gives two papers upon this subject. The first covers Visual Field Anomolies Associated with Suppuration in the Spheno-Ethmoid Group of Accessory Sinuses; the second, Similar Changes Observed in Suppuration of the Fronto-antro-ethmoid Group of Sinuses. In all forty-four patients suffering from sinusitis were examined. Of these the posterior group of sinuses were affected in 33 per cent., the anterior in 47 per cent. and both groups in 20 per cent. These observations covered a period of two years; and after very careful scientific investigation, the author arrives at the conclusion that in at least 90 per cent. of them the visual field of the patients was affected. He found peripheral contraction very general, both in anterior and posterior sinus cases; while central and ring scotoma were significantly absent.

In speaking of the etiology of the ocular symptoms, the author claims that the sinus trouble in each case might be considered the causal agent. This idea is supported by the fact that successful sinus treatment is usually followed by relief of the eye symptoms. He does not, however, accept the suggestion that

intra-sinus pressure is the cause, inasmuch as the diseased sinuses are not closed; but favors the idea that a local toxæmia is the chief cause.

In chronic cases the toxins permeate slowly through the thin sinus wall, the mucosa, being atrophied, offering little resistance to the passage of these substances. "In posterior sinusitis the nasal side of the optic nerve is in direct contact with the sinus wall, and consequently this part of the nerve is most affected, temporal contraction resulting. In the anterior group, the toxin becomes diffused through the orbital tissues before reaching the nerve, hence the whole circumferential fibres are equally affected and general contraction follows."

The author's conclusions are that:—

Peripheral field contraction occurs in fully 90 per cent. of all sinus cases, being usually caused by the action of toxins upon the nerve, the usual form being concentric contraction: that treatment is most beneficial in acute suppuration, that in chronic cases the nerve having been, probably, permanently damaged the condition is less hopeful; that even in these, as there is rarely optic atrophy, treatment may arrest the ocular symptoms.

When shall we Remove Tonsils and What Type of Operation shall we do?

Eugene A. Crockett (*Boston Med. and Surg. Journal*, March 1911): The author deprecates the wholesale removal of the tonsils and advocates tonsillotomy in preference to tonsillectomy: (1) In all cases presenting large non-adherent tonsils filling the cavity of the pharynx. (2) In simple hypertrophy devoid of symptoms. On the other hand, he advocates enucleation: (1) In cases associated with enlarged servical glands, and in articular rheumatism, where the tonsil is probably an ætiological factor. (2) In cases of repeated peritonsillar abscess.

Complications met with after Removal of Tonsils and Adenoids

S. M. Burach (*Zeitschr. F. Laryngol.* Bd. iii, Heft 5): This paper is the result of operations upon 2,000 cases. Three per cent. were middle-aged, and three patients were over 50 years of age. Dangerous hæmorrhage only occurred in three cases from the tonsils after operation, and in five cases after adenectomy. Other complications were: injury to uvula, slight septic infec-

tion, seven cases of purulent otitis media, catalepsy, laryngeal spasm, paresis of soft palate, peritonsillar abscess, loss of teeth.

Mathieu's tonsillotome was used in every case for the removal of the faucial tonsils.

Direct Laryngoscopy

Fletcher Ingals (*Journal of Laryngology*, October, 1911): The writer gives the following reasons why the majority of laryngologists still prefer the older, indirect method of laryngoscopy to the newer method of direct examination and treatment in laryngeal cases: (1) The necessity for special and expensive instruments. (2) The difficulty of keeping the apparatus in order, especially the lighting system, when it is not in constant use. (3) The time consumed. (4) The limitations of the method as regards certain cases. These objections, he says, far outweigh the advantages in the majority of cases in which inspection of the larynx is made, and in a large percentage of cases in which operative measures are to be adopted.

There are many cases, however, in which direct laryngoscopy is of great value. The chief indications for its use are as follows: (1) For the removal of impacted or imbedded foreign bodies in the larynx and the recovery of those that are in positions inaccessible by the indirect method. (2) For diagnosis of laryngeal conditions in infants and children, in whom the indirect method cannot be employed, as in the presence of papillomata, stenosis, malformations, etc. (3) For the inspection of certain parts of the larynx or trachea that are invisible by means of the mirror, and for the treatment of lesions in such localities. (4) When a better view of the condition is desired than can be obtained by the indirect method.

As chief contra-indications he gives the following: High grade dyspnœa, incompensated heart lesions, aneurism of the aorta, myocarditis, active sclerosis when at all severe, conditions causing high blood pressure, extreme weakness, severe hæmophysis.

Preparation of patient for examination by the direct method consists of: Abstinence from food for six hours, and from drink for two or three hours previous to the use of the instrument.

The best position is the upright for the adult, the recumbent for children. Atropine and morphine given two hours before the operation, lessen the secretion and quiet the patient. Œdema of the larynx is to be guarded against after the operation, especially in children. To relieve it, tracheotomy may be required. The croup test is of value in the after treatment of these cases.

Treatment of Singers' Nodes and Other Excrescences of the Cords by Galvano-Cauterization

C. I. Koenig (*Annales des Mal. de l'Oscille, du Larynx; du Nez, et du Pharynx,* November, 1910):

In the surgical treatment of these cases, the author considers removal by galvano-cautery to be preferable to ablation by forceps or curette. In support of his belief he advances two important reasons: (1) The amount of tissue removed can be more exactly gauged. (2) The sealing of the vessels and lymphatics by the heat generated, does much to prevent post-operative infection. He uses a specially constructed cautery burner. The platinum is for the most part protected by a sheath of copper, but at one point projects through the sheath in the form of a bead, which constitutes the cautery point. When the current is on, this bright little sphere stands out prominently against the copper background under reflected light, greatly facilitating precision during operation.

Manifestations of Thyroid Disease in the Upper Respiratory Tract

Burt R. Shurly (*Laryngoscope,* March, 1911): Patients subject to thyroid disease frequently refer their first symptoms to the throat. It has been noticed, also, that septic processes involving the lymphoid tissues, such as tonsillitis, quinsy, scarlet fever, etc., are often direct ætiological factors in the occurrence of Grave's disease; and that removal of the tonsils may be followed by subsidence of thyroid enlargement. It is therefore possible that tonsillectomy may have a place in the prophylaxis of Grave's disease.

In cases of hypothyroidism difficulties of articulation are often present, taste may be perverted; and taste, hearing and smell slightly disturbed.

Cases of myxœdema are sometimes accompanied by infiltration of the nasal mucosa, which latterly becomes thickened and obstructed by a gelatinous yellow secretion.

Editorials

THE CANADIAN HEALTH ASSOCIATION

At last a Public Health Association has been organized for the Dominion of Canada. Such an association would certainly have come into existence many years ago if there had been no American Health Association. The last-named organization has done such admirable work, and contained so many Canadian members, that the formation of a new society for Canada was not considered necessary until about a year ago. A number of physicians and others interested in health affairs met last year in Ottawa and started the organization of the new society.

We are publishing in this issue an account of a very interesting function, held in Montreal on the evening of December 13th, when H.R.H. the Duke of Connaught opened the first Congress. The Governor-General delivered an excellent address on matters pertaining to the health of the public.

Hon. R. L. Borden, Premier of Canada, made some very important statements. Among other things, he said that he did not think the Federal Government had done as much as it should in the direction of the improvement of public health. Speaking as far as he was entitled to speak for those respresentatives for the administration of the affairs of Canada, he declared that they proposed to give this matter their most earnest attention so far as lay within the purview of the Federal Ministers. He referred especially to the need of joining Provincial and Federal action to prevent the pollution of water supplies.

The new Minister of Agriculture created an excellent impression in his delivery of one of the most important addresses of the evening, and intimated that there should either be a separate portfolio for dealing with public health matters, or at least a full-fledged department for the purpose of connection with the Federal Government.

Sir Lomer Gouin told the audience something about health matters in Quebec. He said it was the purpose of the Government to divide the Province into ten districts, each of which was to be in charge of a fully-qualified hygienic expert, elected by competitive examination at the English and French universities.

ONTARIO MEDICAL ASSOCIATION

The next meeting of the Ontario Medical Association will be held in Toronto under the presidency of Dr. Herbert A. Bruce, May 21, 22 and 23. The following have been appointed Chairmen of Committees and Sections:

Committee on Papers and Business, Dr. Graham Chambers.

Committee on Arrangements, Dr. J. T. Fotheringham.

Section on Surgery, Dr. A. Primrose.

Section on Medicine, Dr. W. P. Caven.

Eye, Nose and Throat, Dr. Geoff. Boyd.

Obstetrics and Diseases of Women, Dr. Frederick Fenton.

Dr. F. Arnold Clarkson, 471 College St., is the General Secretary.

THE INSURANCE BILL

The Insurance Bill which was recently passed by the British Parliament after months of strenuous work by Mr. Lloyd-George, the Chancellor of the Exchequer, has received strong condemnation from two classes of people, the working man and the medical practitioners.

We learn from the lay press that there was a large gathering of 2,000 doctors from all parts of the United Kingdom, at a meeting held in Queen's Hall, Dec. 19th. Sir William Watson Cheyne, of King's College, presided, and a large number of prominent physicians and surgeons occupied the platform.

We regret to learn that Sir Victor Horsley, who is so greatly admired in Canada as well as in England, had an exceedingly unpleasant time at this meeting. As a member of the British Medical Association Council he took an active interest in the Bill, and many doctors present charged that he was sacrificing their interests to the blandishment of Mr. Lloyd-George. He was denounced as a traitor and roundly hissed when he tried to defend the action of the Council in promising Mr. Lloyd-George that the members of the British Medical Association would assist in making the measure a success.

The meeting passed a resolution to boycott vigorously Mr. Lloyd-George's scheme, and not to treat the poor under its provisions until the demands of the medical profession were granted. In this vote there were only six dissentients.

Sir Victor happens to be a rather hot-headed Radical, and a strong supporter of the present Government. It will be remembered that he was an un-

successful candidate for the University of London at the last election. We will repeat the quotation of a couple of his sentences, which we have already placed before our readers: "As the representative of a university like ours, which was founded as a protest against, and a practical remedy for apathy born of monopoly and privilege, I would support to my utmost the constitutional steps taken by the present Government to alleviate the injustice and injury to the national welfare neglected by the House of Lords in rejecting and mutilating Liberal legislation. I am a free-trader. Most particularly it is the iniquity and the proposition to tax the people's food that repells me as a biologist, and as one who has been working for many years against the cause of physical deterioration in the Nation." Sir Victor, of course, has a perfect right to hold his own opinions, and to support them in any way he pleases. He said: "A partisan politician can scarcely be considered well qualified to speak to a large body of men on behalf of the British Nation in anything like a judicial spirit."

To us at a distance it seems strange and very unfortunate, that an Insurance Bill which presents so many admirable features, should meet with so much bitter opposition.

HEALTH MATTERS IN ONTARIO

It seems probable that there will be a great improvement in the management of matters pertaining to public health in the Province of Ontario as well as in the Province of Quebec, if not in all the other Provinces of the Dominion in the near future. It is well known, and the fact has been recognized

for some time that Medical Health Officers in this Province have done little or nothing in the way of promoting public health. We of course do not think of blaming them in the smaller villages and in township municipalities, for they get little or no salaries. Public opinion was usually against them in their individual efforts "to interfere with rights of private citizens." In fact, they were so heavily handicapped in many ways that they were able to accomplish hardly anything.

It was a great pleasure to those interested in such matters to learn recently from the Premier of Canada, that a great effort will be made to bring the Provinces as separate entities, and the Dominion as a whole, into closer touch in dealing with health matters.

It is now generally understood that the preservation of public health should be one of the first aims of every Government. We are told by the Toronto *Mail* that the Government of Ontario is considering the suggestion to divide Ontario into a number of districts, seven to ten in number, with a special qualified expert in charge of each. Such a district officer would be responsible to the chief health officer of the Province, and in close touch with the Government. His appointment would not mean the abolition of the local health officer for the local Board of Health. In fact such officers and such Boards would be expected to co-operate with the District Officer.

We are glad to notice that there is such a disposition on the part of the lay press in all parts of Ontario to discuss intelligently the various aspects of the complex question in connection with the preservation of the health of our people from young babyhood up to old age. The people of this Province, like

the inhabitants of all parts of the civilized world, are now being somewhat rapidly educated as to the importance of preventive medicine.

SYNOPSIS OF THE REPORT OF THE REGISTRAR-GENERAL OF ONTARIO, 1910

What the frivolous call "the hatches, matches and despatches record" for the Province of Ontario for 1910, which has been compiled by the Registrar-General's Department, contains some interesting figures with regard to the vital statistics of the Province.

The Report is in the hands of the printers. and will not be ready for the public for some weeks yet.

During the year there were 55,871 births, 24,036 marriages, and 33,539 deaths, or 24.9, 10.7, and 14 per 1,000 of the estimated population respectively for the county municipalities of the Province (including cities and towns).

For the 18 cities the figures are: Births, 18,767, or 32.2 per 1,000; marriages, 11,793, or 20.2 per 1,000, and deaths, 12,303, or 21.1 per 1,000.

The towns of 5,000 population and over are 15 in number, and their statistics are as follows: Births, 2,918, ratio 21.6; marriages, 1,405, ratio 10.4; deaths, 1,109, ratio 14.7.

Of the 33,539 deaths there were 706 from typhoid fever, 2,287 from tuberculosis in all forms, as against 2,380 in 1909. Cancer was the cause of the death of 1,077 persons; 222 died from diabetes, 327 from anæmia, 355 meningitis, 923 apoplexy, 2,240 organic heart trouble, 771 arterial trouble, 464 bronchopneumonia, 1,458 pneumonia.

Diarrhœa among infants under two years of age was fatal in 1,374 cases, while 2,455 died when under four months of age, owing to weakness from birth or ignorance on the part of the mothers with regard to the care of children.

In 284 cases women lost their lives in childbirth.

Of the 1,626 deaths from affections produced by external causes, 91 persons took their own lives by various methods, hanging being the favorite, 26.3 per cent. of this number selecting this means of exit from a weary world; 95 persons were poisoned accidentally; 43 were burned to death; 112 died from burns

received; 33 died from gas poisoning; 266 were drowned; 64 shot accidentally; 209 killed by motor-cars, land-slides, steam and electric railways, etc.; 13 were frozen to death; 8 died from effects of heat—sunstroke; 11 killed by lightning; 18 by electricity—shock; 17 homicides took place, and the balance, 645, died from various accidental causes.

Old age was the cause of death of 3,429 persons.

Two thousand two hundred and seven were still-born.

With regard to mortality among infants, it is found that among those under five years of age, 6,649 died under one year of age; 917 one year old; 424 two years old; 321 three years old, and 247 four years old.

March was the favorite month for births, there being 5,033 in that month. Of the children born throughout the year, 28,664 were males and 27,207 were females. There were 370 pairs of twins, 264 boys and 376 girls. Triplets surprised the happy father in five cases—9 boys and 6 girls.

June continues to hold favor with the bride. Of the 24,036 marriages, 3,555 were celebrated in the happy month, September and December following in the order named, with 2,653 and 2,304 respectively.

Cupid drives his bolt athwart denomination and conventions. Just at the present time the question of mixed marriages is holding a certain amount of public attention, but many of the good people who discuss the matter of persons of different faiths marrying will be surprised to learn to what an extent such marriages are contracted in the Province of Ontario.

It appears that in one year alone Methodists married Roman Catholics, Jews married Gentiles, while in many cases May wedded December.

Out of the total of 7,351 Roman Catholics, no less than 1,509 married out of their denomination. Of the grooms, 665 married non-Catholic brides, and 844 professed Catholic girls became brides of non-Catholic grooms. Of these marriages, the larger number were bétween Catholics and Anglicans; then came Methodists, Presbyterians, Baptists and Lutherans in the order named; but rather strangely, no marriage between a Roman Catholic and a member of the Salvation Army is recorded, while two married Jewesses, and five threw in their lot with as many Jews.

The Canadian profession may be interested to see the attitude of their Scotch confreres in regard to the Insurance Bill of

Mr. Lloyd-George. The following is from the Scotch correspondent of *The Medical Press and Circular*:

THE INSURANCE BILL AND THE PROFESSION.—The Insurance Bill continues to bulk largely among matters of medical interest in Scotland, and meetings of the profession have been held in a number of the chief towns. In Glasgow a meeting of Fellows and Licentiates of the Royal Faculty has considered a report by the Council of the Faculty; the principal resolution passed was one to the effect that there should be a representation of medical men to the extent of one-eighth on all Insurance Committees. Those who have followed the Bill attentively are impressed with the fact that many of the points to which medical men attach importance are left to the final decision of the local Insurance Committees, hence the importance of adequate representation. The second resolution concerned the payment to charities by the Insurance Committees for benefits received, and was carried after some discussion, at which it was pointed out that about three-fourths of the income of the Glasgow hospitals is drawn from employers and workmen, a source of revenue which cannot but fall off when once the Bill becomes operative. The third resolution affirmed the six cardinal points of the British Medical Association. A motion expressing favor to the Bill was rejected by a large majority, and finally the following was unanimously agreed to:—"That in the event of the Insurance Bill becoming law without the amendments recommended by the Association and the meeting, this meeting shall endeavor to ensure that no medical practitioner shall submit to the rules under the Bill." In the Aberdeen area it has been agreed to support both the central and a local defence fund, and unless the Bill is amended the doctors will decline to work under it. This, indeed, is the general attitude in Scotland—to have nothing to do with the Bill in its present form. There is much disinclination to go on with negotiations which result only in illusory concessions. The case of the medical profession has been put forward clearly enough. Their minimum demands are perfectly plain, and there is no sign that they will be met. The doctors in Scotland feel that this eternal negotiating, this extracting of imaginary concessions, is in the highest degree undignified, and that they will be in a far better position if they decline to work under the Bill on the present terms.

ITEMS

A new General and Marine Hospital, erected in St. Catharines at a cost of $75,000, was formally opened November 24th. The building has accommodation for fifty patients.

The National Medical Union of Great Britain has formed a plan to raise a fund of two and a half million dollars from which to make grants to physicians who refuse to treat beneficiaries under the new insurance law.

During the month of November the Sanatorium Medical Society held their two regular fortnightly meetings in the Muskoka Free Hospital. Interesting papers were read by Drs. W. B. Kendall, G. B. Rose, W. E. Ogden, James Beatty and W. J. Dobbie. Cases were shown where possible, which made the meetings more practical. All the men took part in enthusiastic discussions which followed, in which Drs. Pratten, Finnerty and Alexander also joined. Dr. Lollard McLeay, of Gravenhurst, was a welcome guest at the last meeting.

The registration in the 15 largest universities in America is as follows:

Columbia, 7,429; Illinois, 5,118; Chicago, 6,466; Harvard, 5,028; Minnesota, 5,965; Nebraska, 4,364; Wisconsin, 5,538; Toronto, 4,180; Pennsylvania, 5,387; California, 3,450; Michigan, 5,381; Missouri, 3,141; Cornell, 5,104; Iowa, 3,090.

Personals

Col. J. A. Grant, M.D., has removed from Toronto to Halifax.

Dr. C. J. Calhoun, New York City, spent his Christmas vacation in Toronto.

Dr. W. A. Rupert has removed from Roncesvalles Ave. to 78 St. Albans Street.

Dr. P. G. Brown has disposed of his practice in Coe Hill, and is leaving early in the year for Vienna.

Dr. H. McG. Bowen has commenced practice in nose, throat and ear, at 41 Carlton Street, Toronto.

Dr. John A. Tanner (Tor. '82), formerly of Blythe, has commenced practice at Vancouver, B.C.

Dr. Edmund Boyd, Toronto, has passed the Primary examination for Fellowship of the Royal College of Surgeons of England.

Dr. P. B. Macfarlane, who has been associated with Dr. Rennie of Hamilton, is pursuing post-graduate work in Baltimore.

Dr. M. B. Whyte has been appointed Chief Surgeon to the Isolation Hospital, Toronto, at a salary of $1,800 a year.

Dr. Hazelwood has been appointed an Associate Physician in the Health Department of Toronto.

Dr. J. Orlando Orr returned to Toronto, December 18th, after a visit to England.

Dr. Chas. Sheard, Jr., who is still engaged in post-graduate work in New York, visited his parents during the Christmas holidays.

Dr. Lapthorn Smith, of Montreal, is suffering from some serious form of neurasthenia and is undergoing treatment in a sanatorium.

Dr. Jane P. Sproule has returned from England and has opened an office at 47 Grosvenor Street. Dr. Sproule is devoting her attention to ear, nose and throat work.

Dr. Robt. J. Kee (Tor. '01), after practicing for some years in Esterhazy, Sask., has removed to Toronto, having taken up the specialty of diseases of the eye, nose, ear and throat.

Dr. Wm. A. Scanlon has removed from Algonquin to Palmerston, Ont., where he has taken charge of the Ontario Vaccine Farm in the place of Dr. Stewart, deceased.

Dr. Ernest K. Cullen, formerly of Toronto and Baltimore, has commenced the practice of Abdominal Surgery and Gynæcology in Detroit. His offices are in the Washington Arcade of that city.

Hon. Dr. W. J. Roche, Secretary of State for Canada, received the degree of LL.D. from the Western University, London, Ont., Dec. 8th. He was the first graduate in medicine in that university in 1883, and is the first graduate who has received the degree from the university under its new constitution.

Dr. Charles Mayo, one of the Mayo brothers of Rochester, Minnesota, while travelling from Washington to his home early in December, had a severe attack of appendicitis in New York. Appendicectomy was performed and Dr. Mayo has made an excellent recovery.

Dr. George E. Armstrong, of Montreal, President of the Canadian Medical Association, has had serious abdominal symptoms at times for some years. Dr. W. J. Mayo operated on him in Rochester last month and according to latest report an excellent recovery is expected.

Dr. C. B. Oliver, who practised for 18 years in Merlin, Kent Co., Ont., went to Great Britain in January last and did postgraduate work, chiefly in Obstetrics in Dublin, Edinburgh and London. He returned to Canada early in November, and has commenced practice in Toronto, at 541 Palmerston Boulevard.

Dr. A. S. Moorhead, of Toronto, has passed the final examination for the Fellowship of the Royal College of Surgeons, England. He graduated M.B. from University of Toronto, 1906, passed final examination of the Ontario Medical Council in 1907; was House Surgeon Toronto General Hospital from July, 1907, to December 31, 1908. He will return to Toronto to practice.

Dr. Chas. E. de M. Sajous, well known teacher and author, has been apointed Supervising Editor of the *New York Medical Journal.* He has given up his private visiting practice, but will continue his work as a Consulting Physician, Investigator, Teacher and Author. We have pleasure in extending to Dr. Sajous our good wishes and congratulations.

Dr. Norman B. Taylor, of Toronto, has been doing post-graduate work in Great Britain during the past year. He obtained the double qualification, M.R.C.S. Eng., and L.R.C.P. Lond., and also F.R.C.S. Edin.

MARRIAGES

Dr. A. A. Campbell, of Kingston, to Miss Hoyle, Oct. 18.

Dr. R. G. Macdonald, of Sarnia, to Miss Healey, Oct. 20.

Dr. J. A. McInnis, of Porcupine, to Miss Arnoldi, Oct. 30.

Dr. F. Woodhall, of Binbrook, to Miss Touchburn, Nov. 1st.

Dr. Walter Wright, of Toronto, to Miss Phillips, Nov. 1st.

Dr. W. C. E. Spence, of Fort William, to Miss McKellar, Nov. 1st.

Dr. R. J. R. Bright, of Wiarton, to Miss Thompson, of Bigwood, Oct. 18.

Dr. Campbell Howard (son of the late Dr. R. P. Howard, of Montreal), of the State University of Iowa, to Miss Ottilie Wright (daughter of the late Dr. Harry P. Wright, of Ottawa), December 27.

Book Reviews.

Theory and Practice of Thyroid Therapy. By HERBERT EWAN WALLER, M.R.C.S., England, L.R.C.P., London, Honorary Anæsthetist Birmingham Dental Hospital; Medical Officer Balsall Heath Provident Dispensary. A book for general practitioners. Being some experiences of the results of thyroid medication, with deductions concerning the influence of thyroid secretion in health and disease, and certain effects of drugs and various circumstances upon thyroid secretion. London: John Bale, Sons and Danielson, Ltd., Oxford House, 83-91 Great Titchfield Street, Oxford Street W.

This is an endeavor to shed some light on the various manifestations of thyroid inadequacy or hypersecretion written by one who has evidently carefully studied the subject among cases met with in an everyday general practice. Many important points and suggestions are brought out that have probably never occurred to the reader, and there are few reading it who will not find many cases in their own practices to which the facts may be applied.

As something off the beaten track and yet not at all faddish, we can recommend it to our readers.

Modern Surgical Technique in its Relation to Operations and Wound-Treatment. By C. YELVERTON PEARDON, M.D., M.Ch., F.R.C.S., Professor of Surgery, University College, Cork. Illustrated with two colored and other plates and one hundred and twenty-nine illustrations in text. Second edition, revised and enlarged. John Bale, Sons and Danielsson, Ltd., Oxford Street West, London, Eng.

If there is a condition in surgery on which there are widely differing view points, it is technique. In many conditions it is the absence of technique that strikes us most forcibly, particularly modern technique. Dr. Pearson has produced a work that is up-to-date and highly commendable; it is exhaustive; and does not omit the minor details. It takes the history of technique as the starting point, passes through the preparation of the surgeon and patient in detail, and what is so beneficial to the reader are the reasons given for his conclusions. He deals with the technique of the wound, their many varieties; the sutures and

the many materials used, together with the reason for not using some and using others; then the operating room, what it should be and what it should not be, both in hospital and private houses. In all these matters Dr. Pearson has certainly presented the case in an interesting and readable way, a way of easy reading. He does not condemn everything that he does not use, but he carefully gives reasons for not doing so, and they are usually conclusive.

Probably his method agrees with the reviewers and that may be one reason why it is appreciated, and we thoroughly recommend it to the general practitioner as a safe and reliable work to follow on surgical technique.

The illustrations, typography, paper and binding are all that this reliable publishing firm represents.

A new revised edition of the popular work on "Accident and Injury and Their Relations to Diseases of the Nervous System," by Pearce Bailey, A.M., M.D., of New York, has just been published by D. Appleton & Company, New York.

The first edition of this work was printed in 1898. The present revision required a recasting of the entire book, therefore, the present volume is printed from new plates. It is a thorough revision in every sense of the word, in fact a new book, and the title given this revision, namely, "Diseases of the Nervous System Resulting From Accident and Injury," we believe to be a more correct one than the one used when the book was first published.

A number of new illustrations have been added and many old ones have been displaced by new.

Dr. Bailey is an authority upon the subject covered in his book, especially upon medico-legal questions.

The author says in his preface, "Those subjects most fully described in text-books on surgery are dismissed with briefest mention. The late effects of brain injuries, for example, receive more notice than the acute symptoms." For this reason the book is of the greatest interest, not only to the surgeon and neurologist, but to the general practitioner.

Refraction and Visual Acuity. By KENNETH SCOTT, M.D., C.M., F.R.C.S. Edin, Consulting Ophthalmic Surgeon to St. Mary's Hospital for Women and Children, London, E.; late Lecturer

on Ophthalmology West London Post-Graduate College; Professor of Ophthalmology, Egyptian Government Medical School, and Ophthalmic Surgeon, Kasrel-Aini Hospital, Cairo, Egypt. With sixteen illustrations and a colored plate. New York: Rebman Company, 1123 Broadway. Price, $1.75.

This book has been written mainly for the general practitioner who has to do with errors of vision and their correction. Abstruse questions have been avoided as far as possible, and the author's effort has been to make matters as easily understood as possible. To any one who knows the extent of the subject, the effort will appear a bold one, and more especially when we find that the subjects of school inspection of the children's eyes, the vision required in public services, etc., are also included. The teaching in the book is for the most part sound, but exception must be taken to his views on the treatment of myopia, as stated on page 55.

The author discusses color blindness, simulated blindness (malingering), and gives very extensive tables, showing the tests required for admission to the army, navy and civil services, also for various British and foreign railway services.

Any one interested in the subject of refraction and visual acuity, whether as a general practitioner or specialist, will find this book of interest and value.

SPECIAL WESTERN NUMBER.

In furthering the plan of producing special issues of the *American Journal of Surgery* composed of contributions by surgeons residing within a certain geographical area, yet of international reputation, there will be issued in the early part of 1912 a special western number of this magazine. Subjects and those to contribute:

The Operation of Gastroenterostomy. By William J. Mayo, Rochester, Minn.

The Surgery of Tendons. By John B. Murphy, Chicago, Ill.

Operative Treatment for Graves Disease. By George W. Crile, Cleveland, Ohio.

Colonic Intoxication. By J. E. Binney, Kansas City, Mo.

Practical Points in the Surgical Treatment of Exophthalmic Goitre. By A. J. Ochsner, Chicago, Ill.

Treatment of Foreign Bodies in the Œsophagus. By E. Fletcher Ingals, Chicago, Ill.

Brain Surgery Technique. By J. Rilus Eastman, Indianapolis, Ind.

Treatment of Abscesses and of the Necrotic Foci Resulting from the Use of Salvarsan. By A. Ravolgi, Cincinnati, Ohio.

Treatment of Prostatic Obstructions. By E. O. Smith, Cincinnati, Ohio.

Subject not announced. H. Tuholske, St. Louis, Mo.

Artificial Tendons and Ligaments in the Surgical Treatment of Paralysis. By Nathaniel Allison, St. Louis, Mo.

Uterine Cancer. By John C. Murphy, St. Louis, Mo.

Arthritis Deformans. By Leonard W. Ely, Denver, Colo.

Acute Angulation and Flexure of the Sigmoid as a Causative Factor in Epilepsy, with Special Reference to Treatment. By W. H. Axtell, Bellingham, Wash.

The character of contributions prepared by these well known surgeons are of such a nature as to make this number particularly interesting.

Obituary

T. H. THORNTON, M.D.

Dr. Thornton, a very prominent physician of the Bay of Quinte district, died at his home in Consecon, Nov. 24th. He was a member of the Ontario Medical Council from 1894 to 1906.

JAMES W. ALWAY, M.D.

Dr. Alway, one of the oldest physicians of the Niagara district, died at his late residence, Grimsby, Nov. 15th. He graduated from the University of Victoria in 1863.

THOMAS GEORGE BRERETON, M.D.

Dr. Brereton died at his late residence, Bethany, December 10th, aged 51. He received his medical education at Trinity Medical College and graduated from Trinity University in 1881.

J. P. BRUCE, M.D.

Dr. J. P. Bruce, of Chicago, died in the University Hospital of that city after an illness of three weeks, from pneumonia. aged 35. He was born in Wellington County, Ont., but in early childhood moved to Barrie where he received his preliminary education. He went to Chicago to take a course of medicine, and after graduating settled in that city about ten years ago.

Selections.

Absence of Cough in Early Phthisis

Most physicians believe that the cough of phthisis depends on disease in the lung, and they therefore conclude that the absence of cough is proof of absence of phthisis; many even consider examination of the chest for phthisis superfluous in the absence of cough. This belief often prevents early diagnosis. That phthisis may exist without cough is shown by the fact that hæmoptysis often occurs in persons apparently healthy and without any cough. The subsequent course may show that the hæmoptysis was due to an active tuberculous focus. Extreme anæmia, tiredness after rising in the morning, and night sweats are all early signs of phthisis, and may precede cough. Examination frequently reveals tuberculosis in one or both lungs. Cough is not an early symptom of phthisis, and may be absent even when the disease is so advanced that every other sign is present. That cough is absent in early phthisis is further shown by the facts that (1) the necropsy of persons who have not coughed has revealed active tuberculous foci in the lungs, and (2) in persons without cough, infiltration of the apices has been clinically demonstrated, and ultimately phthisis has become obvious. Although the mucous membrane of a bronchus in the vicinity of a small tuberculous focus may secrete gelatinous or pigmented material, the ciliated epithelium of the respiratory tract is capable of removing it without the aid of coughing. And even blood from such a focus may escape through the trachea and larynx and be hawked up without coughing. Hence it is a common complaint with patients in an early stage of phthisis that they have to clear the throat frequently, and the attention of the physician is thus often diverted from the lungs. Not only do the lungs expel a large quantity of secretion merely by the action of ciliated epithelium without coughing, but they tolerate the presence of secretion in large quantities for many hours, as shown by the fact that in late phthisis sputum collects over night in the lungs, and is not expectorated till the morning.

The writer holds that cough in the phthisical is due to laryngeal catarrh, and that without this there is no cough. However, laryngeal catarrh is seldom absent except in early phthisis, and it readily appears as a spring or autumn "cold" in consequence of sudden changes in the weather. Usually such "colds" are transitory, but they may linger on and lead to the examination

of the chest. When this examination reveals pulmonary tuberculosis, blame is attached to the "cold," and a previous history of progressive weakness, anæmia and headaches after work is ignored. In the later stages of phthisis cough is persistent owing to laryngeal catarrh which is kept up by the large quantities of irritating material secreted by the bronchi and cavities.

The earliest tuberculous foci in a lung do not involve even the finest bronchioles, but are limited to minute vessels. It is obvious that these foci cannot *per se* induce cough. As long ago as 1803 Henle pointed out that cough must in such cases depend either on some other complication of the upper respiratory tract, or on irritation of the larynx by bronchial secretion. It was subsequently shown, experimentally, that stimulation of the larynx and trachea induces cough, which does not occur on stimulation of the parenchyma of the lung with a needle. It has further been experimentally proved that the ciliated epithelium is the main factor in cleansing the respiratory passages, not only of normal fluid mucus, but also of blood clots and viscid secretions. Even with raised head such material has been found to travel upwards to the larynx. Coughing is merely an auxiliary mechanism by which matter, which has been carried up under the glottis, may be forcibly expelled. But, though the relation between phthisis and cough is thus shown to be indirect, the influence of the latter on the former is most harmful, for cough irritates the pulmonary tissues surrounding a tuberculous focus, and this leads to exudation of red and white cells into the alveolus and the emigration of tubercle bacilli into surrounding tissues. Cough is therefore one of the most important causes of the spread of tuberculosis from a single miliary focus in the apex to the whole lung, and its reduction is accordingly important in the treatment of phthisis.—*The Medical Review.*

Accelerated Appearance of the Serum-Disease is not Invariably the Expression of Anaphylaxis

Prof. Johann von Bokay (*Deutsche Med. Woch.*) The serum-disease is characterized by various cutaneous eruptions, pyrexia, pain and swelling in the joints, localized œdema, and traces of albuminuria. The period of incubation is usually 8 to 10 days after injection. This is the normal reaction. But in a certain number of cases the reaction occurs earlier and sometimes even immediately after the injection of serum. These accelerated or immediate reactions usually occur in cases in which a previous injection of the serum of an animal of the same species has been

given 3 to 6 weeks or even months or years previously. This phenomenon of acceleration is called anaphylaxis. To avoid this unpleasant consequence it has been proposed to prepare diphtheria antitoxin not only from horses but also from asses, sheep, or cows (anallergic serum).

Von Pirquet and Schick claim that an accelerated reaction indicates with certainty that the patient has previously been injected with serum of the same species. But in the writer's experience this is not necessarily the case even if the reaction is immediate. Two girls, aged respectively 8 and 10 years, belonging to different families, almost simultaneously received an injection of 3,000 units (10 c.c.) of diphtheria antitoxin, which in each case was obtained from the same horse and withdrawn at the same time. A few minutes later (5 in the first case and 8 in the second) typical symptoms of serum-disease appeared, including an intense and somewhat extensive urticarial eruption. Neither child had previously had diphtheria nor received any injection of serum.

During the year 1908 serum-exanthemata occurred in 10 per cent. of the writer's cases, and in 1909 in 23 per cent. The usual incubation period was 8 to 10 days. In the month of Jan., 1909, they occurred in 50 per cent. of the cases, which included the two girls. In all these cases the antitoxin was obtained from the same horse and at the same time (Nov. 1, 1908). Probably the prevalence of the serum-disease was due to some peculiarity of this particular horse.—*The Medical Review.*

Pancreatitis and Mumps

Rudolf Neurath (*Wien. med. Woch.*) describes four cases of mumps which presented during the course of the illness abdominal symptoms suggestive of a complicating pancreatitis. The four cases occurred in two families. In three cases the patients were children, in one an adult. From a study of his own and other cases in the literature the author finds that the typical picture of the complication is that during an attack of epidemic parotitis, usually between the second and eighth day of the disease, nausea and vomiting with or without fever set in suddenly; there is severe pain in the abdomen situated above the umbilicus between the epigastrium and the left hypochondrium; over the same area there is also marked tenderness, and sometimes diminished resonance and a diffuse sense of resistance on palpation. In a number of the cases bradycardia is present. The urine is

always free from sugar. In one case in which the fæces were examined for tryptic ferment the result was negative. Sometimes blood is passed per rectum, and sometimes fatty and oily masses with the stools. The symptoms last usually for a few days only; the prognosis is always good. Cases are described in the literature in which primary pancreatitis, during an epidemic of mumps, appears as the only sign of a mumps infection. The localization of the pain and tenderness and of the resistance suggest disease of the pancreas; moreover, the structural and functional resemblance of the parenchyma of the pancreas to that of the parotid, taken with the fact that in mumps other glands with similar or differing parenchyma are also affected, supports the diagnosis of an affection of the pancreas. The symptoms are compatible with such a diagnosis, which in the author's cases he makes without hesitation.—*B. M. J.*

Neurotropic Action of Salvarsan

K. Heuser (*Wien. med. Klin.*) has had under his observation three cases of nerve affections after treatment with salvarsan. The first case showed a papular iritis and epileptiform attacks in the early stage of lues. In this case 0.2 gram of salvarsan was first given by intramuscular injection, and, later, 0.4 gram intravenously. The epileptiform attacks began about four weeks after the second injection. The patient was by occupation a painter, but there were no signs of lead poisoning. The case may have been one of direct arsenical intoxication, with a coincident, though not demonstrable, chronic lead intoxication, or it may have been one of so-called secondary epilepsy, such as is sometimes seen in the first months after the secondary stage. The second case was of paralysis of the soft palate and vocal cords rather more than a month after an intravenous injection of 0.4 gram of salvarsan. There was only a slight angina, and, although it is true that paralysis does occasionally occur after infectious diseases other than diphtheria, there was no severe general condition to justify such a diagnosis in this case. It thus appears that there was either a direct nerve injury through salvarsan, or that the arsenic prepared a *locus minoris resistentiae* for the action of syphilis. The improvement of the symptoms during a calomel cure appears to support the latter view. The profuse sweating which broke out at intervals for a period of weeks is also to be looked upon as a sign of general injury of the nervous system. The third case was one of syphilis

of the brain with defects of speech and epileptiform convulsions. Such cases point to the need of careful observation of the effects of salvarsan upon the nervous system, because, though the direct effect in injuring the nervous tissue would seem to be less than that of atoxyl, yet it appears not infrequently to have an indirect effect. The author has also made investigations as to the length of time after an intramuscular or intravenous injection, during which arsenic can be demonstrated to be present. Intravenous injections were not made until December, 1910, so that the data with respect to them are still imperfect, but the author finds that the arsenic is still present in the urine one-half to three-quarters of a year after intramuscular injections, still present from one to three months after intravenous injection, in one case being found both in the blood and the urine.—*B. M. J.*

Obstetrical Problems

A. Routh states that the mortality both *in utero* and soon after birth is still far larger than it should be. The accoucheur is responsible for the newborn child, during at all events the first fortnight of life, and in that period nearly one-third of those children who do not survive their first year lose their lives. Progress in the knowledge of the physiology of menstruation, labor, and lactation, and of the causation of the toxic diseases of pregnancy and the puerperium, will not be possible without the aid of the physiological chemist. Obstetricians are still ignorant of the biochemical changes in the blood which influence the cyclical functions of menstruation and ovulation, or which have to do with the implantation of the fertilized ovum and the onset of labor and lactation. Little is known also of the autotoxæmias lying at the basis of pernicious vomiting, puerperal albuminuria, eclampsia, chorea gravidarum, and puerperal insanity. The blood serum of pregnant women hinders the proteolytic ferments, as trypsin, while placental serum has a marked power in destroying cancer cells. Excess of lutein tissue is associated with hydatidiform degeneration of the chorion, while destruction of the lutein tissue prevents implantation of the ovum.—*The Lancet.*

Miscellaneous

On the Pathological Anatomy of the Vocal Cords

F. Blumenfeld (*Zeitsch. f. Laryngol.*, Vol. iii., Part III.)

The text of this interesting paper was supplied by a specimen of laryngeal carcinoma removed post-mortem from a man who died from accident prior to an intended operation for removal of the laryngeal disease. The preparation showed a carcinoma corresponding in extent exactly with one entire vocal cord, the boundary of which had not been transgressed.

From the consideration of this and similar cases, together with the anatomical conditions of the cords, the author concludes that carcinoma of the vocal cord grows chiefly in the direction of its long axis; and that the greater part, or even the whole of it, may be involved before it encroaches upon surrounding parts. The method of growth is due, the writer believes, to the arrangement of the sub-mucous lymphatic space, which forms a closed sac. This sac is bounded above by the linea arcuata superior of Reinke, which separates it from the ventricle of Mortgagni; and below by the linea arcuata inferior, which separates it from the lymphatic space of the sub-glottic mucosa. These lineæ arcuatæ correspond to the lines of transition from squamous to cylindrical-celled epithelium.

From these facts he considers that carcinoma of the vocal cord occupies an exceptional position, verified by the good results which sometimes follow endo-laryngeal operations.

He finally suggests the following classification of laryngeal carcinoma for clinical purposes:

1. Extrinsic carcinoma, affecting ary-epiglottic folds, inter-arytenoid area, or pharyngeal walls of larynx.
2. Intrinsic carcinoma, affecting parts of the interior of the larynx other than the vocal cords.
3. Intrinsic carcinoma, limited to one or both vocal cords.

The Post-Typhoid Tonic

It is usually at this season of the year that typhoid fever exhibits its maximum incidence, especially in the larger cities. One probable reason for this is the return of the army of families to city homes from the many more or less unsanitary summer

resorts in country districts during the stage of incubation, and the subsequent development of the characteristic symptoms of the disease. As every physician realizes, the systemic poisoning is usually profound and the duration of the infection is such that the organism is almost always distinctly depreciated and devitalized after the four, five or six weeks febrile period. This condition of general systemic depression at the beginning of convalescence certainly indicates the necessity of reconstructive measures. As soon as it is safe to gradually increase the patient's dietary, it is also wise to commence tonic and hæmatinic treatment. Care must be taken, however, to avoid derangement of the digestion, and for this reason, Pepto-Mangan (Gude) is especially indicated as the most efficient, readily tolerable and generally efficient reconstructive and hæmatic. This organic combination of the peptonates of iron and manganese never creates aversion, destroys the appetite nor causes gastro-intestinal irritation. Through its regular use typhoid convalescence is promoted and distinctly hastened.

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Bornyval

This recognized sedative has been made the subject of a publication by A. Callivokas, who confirms once more its usefulness in nervous excitement of various kinds. The preparation has given very good results in daily doses of 3 to 6 capsules, particularly in neurasthenic anaphrodisia, agoraphobia, anomalies of menstruation, incontinence of urine and hysterical disturbances associated with melancholia, insomnia and excitement. In chronic diseases too it has been found an efficacious auxiliary. In a tuberculous woman suffering from palpitation, this left off immediately on the use of bornyval. In the case of another woman suffering from mitral insufficiency and attacks of giddiness a successful result was obtained within a short time. Appreciable improvement and relief were also apparent after four days' treatment in a patient with tuberculous peritonitis coupled with vomiting and attacks of giddiness. By reason of these and similar favorable results the author regards bornyval as a prompt and trustworthy remedy.—*Merck's.*

Calciichloridum

Wright's original investigations on the action of calcium chloride on the clotting of blood led to the discovery of valuable new methods of applying calcium salts in therapeutics, e.g., in dealing with the serum disease. Similarly the works of R. Chiari and H. Januschke are sure to enlarge the field of utility of the calcium salts. Januschke has shown that pleural effusions such as may be produced in dogs by iodine poisoning are checked by subcutaneous injections of calcium chloride, showing that the walls of the vessels are to some extent strengthened by the administration of calcium. This result is partly confirmed by the pharmacological investigations of Chiari. He found that

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by removing calcium the permeability of the walls of the vessels was increased. The authors accordingly tested several other substances which were known to produce pleural effusion with great regularity, viz., diphtheria toxin and thiosinamin. With these substances it was also found that the action was checked by calcium injections. They were also able in animal experiments to prevent completely, or to greatly reduce, the inflammatory oedema of the conjunctiva following the instillation of mustard oil by enriching the organism sufficiently with calcium salts. It is possible that the results of these authors may lead to the use of calcium chloride in transudation and exudation in human medicine. The most efficacious method of application would be by subcutaneous injection. —*Merck's.*

Æmilius Jarvis & Company, investment brokers, are advertising in this issue what should be a most attractive investment, namely, the First Mortgage Gold bonds of the Canadian Locomotive Co., Ltd., of Kingston, which yield the investor 6% per annum.

A feature of the offering is that the bonds may be obtained in $100 amounts, $500 amounts or $1,000 amounts, making the investment obtainable by both small and large investors. The Canadian Locomotive Company has been in existence since 1855 and is one of Canada's oldest corporations. The business offering the Company has reached such a magnitude that it has been found necessary to provide immediately for the doubling of the Company's output, and it is expected that within a short time arrangements will have to be made to permit of the trebling of the Company's output. We would direct the favorable attention of our readers to this investment. Full particulars will be sent by Jarvis & Co. to any person interested.

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On the following day the reporter found on his desk a frigid note asking "Which is the west end of a boy?"

It took only an instant to reply: "The end the son sets on, of course."—*Western Medical Review.*

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have rendered their decision, awarded the prizes, and checks have been mailed to the following physicians:

L. Porsenna Solsman, M.D., 137 Blue Hill Avenue, Boston, Mass.	1st	prize,	$300.00
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Nelson Du Val Brecht, M.D., 609 22d St., N.W., Washington, D.C.	3rd	"	150.00
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The Pain of Hypersthenic Dyspepsia

Vires, of Montpellier, in the *Journal de médicine de Paris* for August 12, 1911, recommends the following mixture:

℞ Tincture of hyoscyamus ..... ʒv ;
Tincture of aconite root ..... ʒijss ;
Tincture of gentian ..... grs. lxxv ;
Essential oil of anise ..... ♏x.
M. Sig.: Ten drops in water, two or three times a day.

—*N. Y. Med. Journal.*

The Presence of Albumen in the Expectoration: Its Practical Importance.

Gantz and Hertz. (*La Presse Méd.*) The authors examined the sputum in 125 cases divided as follows: 1. Pulmonary tuberculosis, 60. 2. Fibrinous pneumonia, 8. 3. Gangrene of the lung, 1. 4. Pleurisy with effusion, 4, included in 2. 5. Pleurisy subsequent to pneumonia, 4. 6. Disease of the cardiac muscle, 6. 7. Disease of the heart, 9. 8. Chronic bronchitis with emphysema, 8. 9. Nephritis, 9. 10. Various affections, 20. The authors take 10 c.c. of sputum, 10 c.c. of distilled water, and 2 c.c. of acetic acid (3 per cent.), stir the mixture with a glass rod, and filter and boil it. In division 1 57 (95 per cent.) gave a positive reaction; in 2, 3, 4 and 5, the reaction was positive in all the cases. In 6, 7 and 8, the reaction was negative if there were no pulmonary complications. In 8, the reaction is generally negative. In the 20 various affections (gastric ulcer, gastric cancer, hysteria, gastritis, etc.), in five cases a positive reaction was obtained; three of these after dysentery showed signs of pulmonary tuberculosis, but no tubercle bacilli were found, in one (adeno-carcinoma of the liver) pulmonary œdema was also present, and in the other (hepatic cirrhosis), the reaction was at first negative but later became positive, due probably to pulmonary œdema. The authors consider that (1) the albuminous reaction should be regularly employed at the bedside. (2) It can be regarded as a specific reaction, as it reveals the existence of pulmonary œdema or an inflammatory process. (3) Bronchial catarrhs do not show the reaction. (4) Initial and advanced stages of pulmonary tuberculosis, with the exception perhaps of the fibroid form give a more or less pronounced reaction. (5) Pneumonia and embolus of the lung give a positive reaction and (6) the same applies to pulmonary œdema. The authors also consider if examination for tubercle bacillus is negative, but the clinical signs speak in favor of tuberculosis, the presence of albumen in the sputum clinches the diagnosis.

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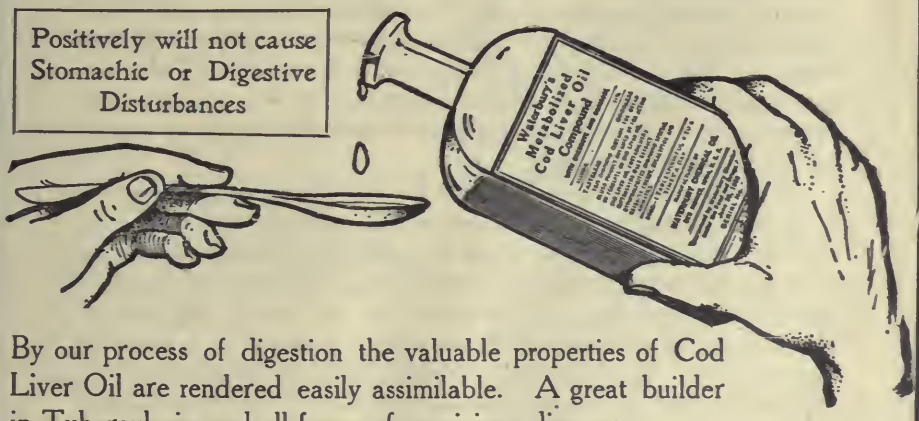

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The Lost Arts

We are sometimes made to feel humble in the midst of our triumphal march of progress by being told that in the ancient civilizations men did many things better than we do them now, and that at the best we ought to recognize that what we consider discoveries are mostly but rediscoveries. Probably we need this sort of corrective to self-satisfaction; nevertheless, it seems likely that modern iconoclasts will destroy its efficiency. "The lost arts" is a catch-word by which we set great store, and according to Dr. W. D. Richardson* its popularity in this country rests largely on the prominence given it by Wendell Phillips in his lecture on this topic, which he repeated two thousand times, more or less, in lyceum courses all over the country. Dr. Richardson examines the evidence on which rest the claims of unusual chemical achievements by the ancients, and finds it worthless.

The ceramic arts, it is true, did yield products at certain times which were not duplicated later, but it was not the art but the materials which were lost, for the results obtained by the potter depend in large measure on the particular clays he has to work with, and when a certain supply of clay gave out a particular form of pottery might be discontinued. Fabulous tales of glass, with unequaled beauty and unbelievable ductility and malleability, are of wide popularity. To be sure, the ancients did make a sort of glass, opaque or translucent, often possessed of great beauty from the standpoint of the fine arts; but when it became possible to make a good transparent product the imperfect if more beautiful form lost its market and ceased to be made. Recently the interest in objects of art made of opaque and translucent glass has revived, and this glass is again being manufactured, but the art of making it was never entirely lost. So, too, the stories of marvelous cements, plasters, dyes and pigments, vastly superior to anything now available, are found on examination to possess no truth.

We must always remember that only the best examples of the materials used by the ancients can now exist; it is not at all fair to judge their entire work by these exceptional specimens. As we have pointed out in these columns before, the reputed lost art of embalming, as performed by the ancient Egyptians, was nothing more marvelous than simple pickling in a brine of common salt; its wonderful efficiency was contributed by the dry climate in which the bodies were left. The oft-repeated statement that the same people filled carious teeth with gold according to the most modern practice, is also a myth. The

* An address delivered before the American Chemical Society, Dec. 28, 1910, Science, April 7, 1911.

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are often less productive than they should be, simply because he has so many demands upon his time that he cannot study carefully where best to place his surplus.

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A new preparation with a function quite distinct from the renowned Neave's Food for Infants. Has been introduced for those requiring a Milk Food absolutely free from starch, for very young babies. It may be given in conjunction with the breast, if the mother's supply is scanty or poor in quality, without the child being sick afterwards. It is instantly made by simply adding hot water. Neave's Milk Food should be followed by the ordinary Neave's Food for Infants directly it becomes advisable for the child to take something besides milk.

Report of Public Health Laboratories, London Hospital, Medical College, London, Eng.:

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An M.D., M.R.C.P., London, Eng., writes: "Have prescribed your Milk Food frequently . . easily digested . . without any after acidity, which is common with Foods containing alkaline elements, and I shall recommend it further."

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building of the pyramids involved no preternatural knowledge of mechanics, but simply the inhuman use of myriads of slaves. Some arts, of course, depend on dexterity and manual skill, best transmitted by the personal training imparted by one artisan to another, rather than on scientific principles. If, therefore, the demand for the objects so produced becomes lessened, as by war, social disturbances, or change of customs, the arts may be forgotten. Real science, however, does not go backward, and to such extent as arts depend on science rather than on exceptional personalities, or on the continued maintenance of a high level of dexterity and skill, they cannot well be lost.—*J. A. M. A.*

The Grand Climacteric in Man

The word "climacter" meant originally " a step of a ladder," and has long been applied to those years in our lives which mark great changes in the functions of the body. At present "the climacteric" stands for the fundamental changes that occur at the menopause, but the fourteenth year, or time of puberty, is strictly a climacteric period as well, and occurs in both sexes. Recently some observers have suggested that the sixty-third year of man's life is marked by as characteristic symptoms as the forty-second or forty-ninth of woman's life, and that it may be regarded as our "grand climacteric." Of course, as in many women, the symptoms are often slight and pass without special notice, but it would appear that there are enough marked cases to render the theory very acceptable as a solution of the cause. It is argued that the cause may be arteriosclerosis, but probability is against this. There can be no doubt in any doctor's mind that there is a well-marked periodicity in the sexual feelings of the regulated male life which is only comparable to the menstrual period of the other sex, even though unattended by such marked phenomena. That the internal secretions of the testicles, and probably the prostate, exercise a similar influence to that of the ovaries, is shown by the similar effects of removal of these organs, and, from analogy, it would appear very likely that the sexual life of man wanes like that of woman. At all events the hypothesis is interesting, and useful as a stimulus to future observation and experimental research.—*Medical Press and Circular.*

Hand Work.

Doctor: "I must forbid all brain work."
Poet: "May I not write some verses?"
Doctor: "Oh, certainly."—*Christian Intelligence.*

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Alvarenga Prize of the College of Physicians of Philadelphia

The College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Senor Alvarenga, and amounting to about $180.00, will be made on July 14, 1912, provided that an essay deemed by the Committee of Award to be worthy of the prize shall have been offered.

Essays intended for competition may be upon any subject in medicine, but cannot have been published. They must be typewritten, and if written in a language other than English should be accompanied by an English translation, and must be received by the Secretary of the College on or before May 1, 1912.

Each essay must be sent without signature, but must be plainly marked with a motto and be accompanied by a sealed envelope having on its outside the motto of the paper and within the name and address of the author.

It is a condition of competition that the successful essay or a copy of it shall remain in possession of the College; other essays will be returned upon application within three months after the award.

The Alvarenga Prize for 1911 has been awarded to Dr. Francis D. Patterson, of Philadelphia, Pa., for his essay entitled, "The Parathyroid Glandules."

THOMAS R. NEILSON, M.D., *Secretary.*

THE WEEK IN SCHOOL.

Monday's Adenoidal Day—
  Bring bandages and salve;
For Doctor Jones will cut away
  The adenoids you have.
No doubt you will be overjoyed,
  When Doctor Jones is through,
To know no fretful adenoid
  Again will trouble you.

Tuesday will be Tonsil Day—
  Of that please make a note;
For Doctor Brown will cut away
  The tonsils from each throat.
Bring cotton, lint and vaseline.
  This class meets sharp at ten,
And tonsils will be snipped off clean—
  Nor trouble you again.

"infallibility is a word not found in the therapeutic lexicon.

Reliability, however, is a word often looked for and exceedingly necessary in drug therapy. To any remedy whose reputation is based upon reliability, no concern need be given to its infallibility.

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For inflammatory throat and chest conditions, rheumatic joints, etc., a thick and hot antiphlogistine dressing will give the doctor and patient the hoped for relief."

Wednesday is Appendix Day
For Classes A and B;
When Doctor Smith will cut away
This superfluity.
Please don't forget the day, as said—
The classes meet at ten.
Bring needles and a spool of thread
To sew you up again.

Thursday's Antitoxin Day—
So kindly be prepared;
Bring gauze and antiseptic spray.
All right arms will be bared,
Or left arms if you so elect.
Be punctual, pray do;
For Doctor Puncture will inject
The serum sharp at two.

Friday's Vaccination Day
For fall and winter terms;
Those who have fresh scars will stay
For antityphoid germs—
Half a billion's the amount.
Classes meet at four.
Doctor Green will make the count—
Doctor Gray will pour.

Saturday's Reaction Day—
Thermometers at three;
Bring stethoscopes—and Doctor Gray
Will make blood-counts, to see
How science triumphs o'er disease—
How antitoxins rule.
Now, mark the weekly programme, please,
And don't be late for school.

—*Ex.*

The Canadian Practitioner and Review

Vol. XXXVII. TORONTO, FEBRUARY, 1912. No. 2

Original Communications

NASAL ACCESSORY SINUSES*

Different Methods of Treatment.

By Ira M. Hurd, M.D., New York.

It is well to look at the etiology and pathology of nasal sinus diseases before considering their treatment. The usual cause of sinus trouble is a deformed middle turbinate, with which is frequently associated a septal deviation to that side, an enlarged ethmoidal bulla or the uncinate process may crowd in upon the naso-frontal duct, superimposed upon these abnormal anatomical conditions, the changes due to infection of the nasal mucosa which turn the naturally open sinuses into closed infected cavities.

The cases should be divided into acute and chronic, mild and severe. At times what appears to be a mild case may be the most menacing to the individual.

It is also necessary to make sure whether one is dealing with a purely acute condition or an acute exacerbation of a chronic inflammation. An acute exacerbation is far more dangerous than a simple acute inflammation. In December, 1906, I saw a boy 16 years old, whose only history was recurring frontal headaches for several years to which little attention had been given. For one week he had had a nasal cold. The day I first saw him he had a chill, followed by a temperature of 105° F., pulse, 135, with much frontal pain and tenderness. Examination of the nose revealed inflamed membrane about the naso-frontal duct with some pus. Transillumination showed right frontal sinus light, left

* Read at meeting of Ontario Medical Association, Niagara Falls, Ont.

dark, both antra light. By shrinking the tissues with cocaine and saline douches, the temperature dropped to 99.8° by the next morning, but again reached 105° at 3.30 p.m., at 11.30 p.m. temperature still 105°. I then removed part of the middle turbinate with considerable difficulty on account of a septal deviation, but could not get into the frontal sinus. However, I washed out a large ethmoidal cell and the temperature dropped to 103°, but the next morning it was climbing again, 104°, continuing to 105°. I decided to open the sinus externally. He had a decided leucocytosis, 25,500, polymorphonuclears, 81.6%. A Killian was done, the sinus was full of pus under considerable pressure, the lining membrane was necrotic and easily lifted away from the bone. There was a large ethmoidal cell that occluded the naso-frontal duct, the same cell that I had washed out the night before and which had prevented my reaching the frontal sinus. It was three days before his temperature was normal. A case like this shows how suddenly a mild chronic affair can menace life.

The acute inflammations will, without complications, usually recover under simple medical measures, attention to the bowels, diet and nasal douches, plus at times a slight intranasal operation.

The chronic inflammations will generally require surgical measures, intranasal usually, in a few cases a more radical external procedure.

The complications of sinus disease will require sound surgical judgment and should be met promptly, if there is any doubt about what can be done intranasally go in from the outside where the opportunity to see what you are doing is the best, and the diseased tissue can be the more thoroughly cleaned out.

Nasal sinus disease, especially chronic cases, quite frequently involves several contiguous sinuses, generally the ethmoidals are the first involved, then extending to the frontal, antrum or sphenoid.

Orbital and ocular complications are the more frequent. Meningeal and cerebral complications take place more frequently than was formerly supposed. Gastric and intestinal derangement is quite often associated, from the swallowing of pus. Acute otitis and mastoiditis at times derive their infection from the nasal sinuses.

This priority of the ethmoidal infection leads me to think that these cells are not always given the attention their importance demands. They extend frequently out over the orbit where it is impossible to reach them through the anterior nares. In one case I found an anterior ethmoidal cell that extended fully an inch out over the orbit. This particular set of ethmoidal cells

were accompanied by much frontal pain, tenderness and headaches with vertigo. There was a small amount of nasal purulent discharge. The eyes were normal. The middle turbinate and ethmoidal cells were removed as far as they could be seen, without relieving the symptoms. The external operation proved the frontal to be normal, but in reaching the ethmoidals this very large cell was discovered which was filled with thickened membrane, all the ethmoidals and the anterior wall of the sphenoid sinus were removed. This resulted in the immediate relief of the headaches, and the vertigo disappeared in four weeks.

These cases that have the sinuses filled with very thick membrane are very obstinate to intranasal treatment. A case to illustrate this condition had ethmoid and frontal involvement. He had had recurrent nasal colds for over three years, with frontal and occipital headaches. The anterior end of the middle turbinate and some of the ethmoidal cells were removed two years before I saw him. He had gradually become worse, and was extremely nervous, feels mentally dull, lacks application, is easily fatigued and on the border of melancholia. The examination showed polypoid tissue about frontal duct with some pus. A probe could easily be passed into the frontal sinus by which dead bone was detected on the posterior frontal wall at the frontal orifice of the duct. The X-ray showed a fairly large frontal sinus which was very cloudy. A Killian was performed, but just before the operation I, as I supposed, washed out the sinus through a canula, but to my surprise when I removed the anterior frontal wall the pus and sinus membrane welled up into the wound under considerable pressure. When all the anterior wall was removed it was found that the canula had left a blood stained path through this thickened membrane, and the fluid from the douche had only followed the tract of the canula on its way out of the sinus and had not cleared out the pus or relieved the tension to any appreciable extent. This case shows how hopeless intranasal treatment is in this condition.

The antrum: acute inflammation; first determine the source of the infection, nasal or dental. The majority are nasal, dating from an attack of influenza or nasal cold, the dental cases are far more apt to be of a chronic nature. Though the transilluminating lamp will help in the diagnosis, a good X-ray plate is of far greater value. Suction with Bier's apparatus sometimes brings pus from under the middle turbinate near the antral orifice which is a fairly sure indication of antral disease, but an antral trocar passed through the naso-antral wall under the inferior turbinate is the surest way of arriving at the diagnosis.

The acute cases will frequently clear up with repeated douching through a hole in the antrum made by a trocar. With a little care the original hole can be found daily, and the antrum washed out without discomfort to the patient. If the purulent matter does not diminish daily under this treatment, it is only a waste of time to continue. Then the antrum should be opened into the nose by removing the anterior third of the inferior turbinate and then removing all the naso-antral wall up to the attachment of the inferior turbinate. This wall can be easily removed by first puncturing it with Myles' antral chisel, then the opening enlarged with punch forceps and Wagener's antral forceps, until all the antral wall is removed beneath the inferior turbinate. This procedure will cure most cases of antral disease, where it is alone infected. Do not expect it to clear up with either the ethmoidals or the frontal sinus above infected. There are a few antra that will not get well by intranasal treatment, then it is necessary to do an external operation through the canine fossa. The incision runs along the gingivo-labial fold from the canine tooth to the last molar. After retracting the periostium the whole anterior antral wall is removed, giving especial care to the corners, then all the lining membrane is curetted out until it is a clean bony cavity, next the bony nasal wall is carefully removed from the nasal mucosa, saving all the membrane possible. The inferior turbinate bone is also shelled out, this makes its membrane available. This nasal mucosa is used to make two or three flaps that will cover to the best advantage the antral walls. One of the flaps should be attached anteriorly in such a manner that it can be wrapped around the anterior rim of the opening into the nose to prevent exuberent granulations in this locality. By this method the nasal mucosa lines a good share of the antral cavity, and as the antrum now is simply a large recess of the nose, when healed, the patient can no longer suffer from antral disease, as this antral recess will hereafter be governed by the conditions of the nose alone. If the patient contracts a nasal cold the same condition pertains in the antral cavity, and when the cold clears up the antrum does likewise.

The sphenoidal sinus, next to the antrum gives the best results under intranasal treatment, though it is seldom alone infected, most of the acute cases will recover under saline nasal douches and injections of saturated argyrol solution into the sinus. If there is great pain, which is the case when the orifice closes, this pain being referred to the parietal, occiptal or deep seated behind the eye, or there are ocular changes, free drainage must be immediately established. This can be done intranasally

by removing part of the middle turbinate bone resulting in a good view of the anterior sphenoidal wall. This wall can then be removed with biting forceps, which is as far as one should generally go, because of the very thin walls of the sinus makes it dangerous to use a curette. If it seems necessary to gain better drainage, use a dull forceps, grasping the thickened membrane and pulling it away carefully. It is only necessary to read one report of rupture of the cavernous sinus followed by death, from the use of the curette in the sphenoidal sinus to approach this cavity ever after with the greatest caution. The sphenoidal sinus, in both acute and chronic conditions, is usually associated with a similar condition in the ethmoidal cells, especially the posterior group, and should be treated in conjunction with them.

The ethmoidal cells are probably the most frequently affected. The acute cases will usually recover under medical measures, though it may be very severe, as in influenza, with extention into the orbit requiring immediate drainage, best by the external route where one can feel sure that it is all cleaned out. This spring I saw a boy, eight years old, who had had grippe three weeks before with some nasal symptoms. The day before I saw him his upper eyelid became œdematous, with some frontal pain, much bone tenderness and considerable swelling and pus about the infundibulum. I opened the sinuses externally and found pus in the orbit just posterior to the lachrymal groove, where an anterior ethmoidal cell had ruptured. These cells, also the frontal, were severely infected, with pus under some pressure. The frontal sinus at this age is small, and could be easily cleared out from below without removing the anterior wall.

Chronic ethmoiditis will rarely get well without the removal of the diseased tissue. These cases run the gamut from very mild infection in which is produced the œdematous nasal polyp (which by the way is probably always due to sinus disease) to bone necrosis. The mild conditions can be cured intranasally, the more severe ones depend largely on their anatomical features whether they will clear up with intranasal treatment. Here the X-ray plate is of great service. If it shows the ethmoidal labyrinth to be compact with no extentions over the orbit, one ought to be able to reach all the cells through the nose, but if there are extentions of the cells out over the orbit the chances of an intranasal cure are not very good. Sometimes these cells extend an inch externally. The frequent association of frontal and sphenoidal sinusitis must be taken into account in the treatment.

In removing the ethmoidal labyrinth intranasally the whole middle turbinate should be taken out, then the diseased ethmoidal

tissue removed carefully. As soon as the operative field becomes obscured with blood one should cease until it is controlled or wait until another day to finish.

The frontal sinus usually becomes infected on account of some deformity about the naso-frontal duct, the middle turbinate, the ethmoidal bulla or the uncinate process crowds in upon the nasal orifice of this duct, so that if the nasal mucosa swells the duct soon becomes narrowed or completely closed, converting the frontal sinus into a closed infected cavity, causing pressure symptoms. This condition in acute cases can usually be relieved by nasal saline douches and shrinking the nasal membrane with cocaine and weak suprarenal solution. If these medical measures do not suffice the anterior end of the middle turbinate should be removed. Bier's suction apparatus will aid in withdrawing the secretion from the sinus.

There is one class of cases worth bringing to your attention. It is the supraorbital neuralgias due to changes in the sinus secretion in which a very thick mucus is produced. This neuralgia is of a periodic type, starting at a certain hour each day, continuing for a certain time, then suddenly stopping, the patient feeling quite well the rest of the day. The period of the neuralgia is about the reverse to the usual frontal sinus pain which starts as soon as the patient gets out of bed, and lasts until the sinus has drained itself to some extent, which can be best illustrated by the following history: A man, 34 years old, of good habits, has had intense frontal neuralgia from 10 a.m. to 3 p.m. for two days; he gives a history of having a similar condition two years previously for six weeks that came on at 10 a.m. and lasted a certain time each day—the pain was so intense that he became delirious. He was in a Mexican mining camp; at the time for the pain to come on he would lie down and endure it for several hours, becoming oblivious to his surroundings. It would stop at a certain hour, when he would proceed with his duties. On examination I found him extremely tender over the frontal sinus, the mucosa about the infundibulum was intensely congested, the least pressure in this region would increase the neuralgic pain. I observed this man go through his period of neuralgia for two days, and I do not remember seeing one suffer more intense pain. As I have said it came on suddenly in an apparently healthy man, and he was completely incapacitated until the pain stopped, then he felt quite well again, considering the strain he had been through. I removed the anterior end of the middle turbinate and washed out a thick plug of mucus from the frontal sinus when the neuralgia immediately disappeared not to return.

If there are orbital complications, such as œdema of the lids, proptosis, etc., it is better judgment to open the sinus externally. I fully appreciate that some cases will be relieved by intranasal measures, but it is usually guess work, and the infection may extend while you are temporizing. It might be well to add that orbital complications are comparitively rare.

The X-ray plate is of the greatest help in frontal sinusitis, especially in the treatment of the chronic conditions, the transilluminating lamp may be of some service, but should only be looked upon as one of the minor adjuncts for diagnosis.

In the chronic cases, sometimes a clear history can be gotten where the condition started from an attack of influenza or a severe nasal cold, in others no sudden onset can be traced.

The usual symptoms are bone tenderness, frontal pain, frontal headaches, indefinite sensations about the eye, vertigo and a discharge of pus from the nose. Purulent nasal discharge and tenderness are the two most frequent symptoms of which the patient complains.

The object sought is to establish drainage. This may be effected by simply removing the anterior end of the middle turbinate, it may also be necessary to take down some of the uncinate process and remove the anterior ethmoidal cells. Here the X-ray plate is of great service in determining how much can be done intranasally toward enlarging the naso-frontal duct. Where the plates show sufficient room between the nasal septum and the inner angle of the eye and the side view shows a deep sinus, it is justifiable to enlarge the duct intranasally at the expense of its anterior and external walls. This should be done with great caution, using instruments that cut away from the brain. It is also well to leave some of the mucous membrane lining of the duct to prevent stricture later.

Mild cases can be irrigated with astringent solutions, probably the best is zinc sulphocarbolate as strong as the patient will tolerate, starting with twenty grains to the ounce, injections of saturated argyrol, freshly made, or silver nitrate from one per cent. to saturated solution. I use the strong silver nitrate solution in old chronic cases where there is a moderate thickening of the membrane; remembering that some individuals do not tolerate these strong solutions, I start with weaker ones and work up to 480 grains to the ounce. The sinus is first washed as clean as possible, then 10% solution of cocaine is injected into the sinus, and when it is anesthetized inject the strong silver solution, flooding the nose at the same time with a solution of sodium chloride, so that as soon as the silver nitrate emerges from the

sinus it is turned into sodium nitrate which has no effect upon the nasal membrane. This method has given me some permanent results.

In cases where the discharge is more mucoid than purulent Beck's paste will give good results; it should be injected solid with the idea of filling the sinus cavity and creating some pressure on the thickened membrane, and the bismuth nitrate acts as an antiseptic.

Bier's method of producing hyperæmia by suction has much in its favor in conjunction with the above methods.

It is often asked, what proportion of sinus disease is amenable to these intranasal methods? From my experience between 90 and 95% can be relieved or cured. Shall we try intranasal treatment in all cases first? No, there are some cases in which it is very doubtful or hopeless to expect any results through the nose. Cases in which there are great pain and severe headaches, impaired health, necrosis, a productive inflammation in which the tissue is much firmer and more vascular than the ordinary polypoid tissue, orbital, ocular and cerebral complications and some few patients that have not the time to spend trying the more conservative methods.

The external route holds many advantages and some disadvantages. Among the advantages are that one can directly see the anatomical and pathological conditions and should be able to clear out all of the diseased tissue except in the sphenoid sinus. The cure is shortened from weeks to days and a recovery obtained in a larger proportion of the cases. Some of the disadvantages. It submits your patient to the risks of a major operation (for instance, I had one patient die of ether pneumonia. This case showed at autopsy that the external and posterior bony walls of the sphenoidal sinus were softened and the dura adherent to them; what would have happened if the man had not died of pneumonia is impossible to say, but the operation should have been done months before). The remote dangers of diplopia and meningitis also osteo-myelitis, the last two I have never seen though so formidable that their possibility should always be born in mind. Diplopia means poor technique or carelessness. Deformity is due to the same causes as diplopia, except the cupping of the forehead from removal of the anterior frontal wall; this can be corrected with paraffin injection if the patient wishes, but I have yet to have a patient seriously object to this depression.

The Killian operation is the best suited and gives the best results as to cure of any operation devised to date. The two reasons for an external operation are best met by this method, that

is, ability to see everywhere, especially where it is necessary to enter the ethmoidals and the sphenoidal sinus and also to give the greatest amount of drainage into the nose with the least amount of disfigurement. Recently there has been some discussion about leaving the anterior frontal wall to prevent deformity. I am not ready to admit this as a good procedure, because if a small amount of mucous membrane is left in some pocket of the sinus, it will act as a cyst or point of infection. The safest way is to remove the anterior wall in the large sinuses, the small ones it does not make any difference, as there will be little deformity, and if the anterior wall has been removed you are absolutely sure the sinus is clean. Theoretically, there may be more danger in removing the anterior from osteo-myelitis, that is a point with which I have had no experience, and I hope something praetical may be brought out in the discussion.

A perfect cosmetic result can be obtained by attention to the minor details, such as cross marking the line of incision before making the cut, then be careful, injure the obicularis muscle as little as possible and never disturb the periostium over the arch of bone, and do not mangle the edges of the wound in elevating the periostium, and lastly, whether you use sutures or metal clips, take them off inside of twenty-four hours, and you will have a result of which you will not be ashamed..

15 East 48th St.

DIFFICULTIES IN BREAST FEEDING*

By George S. Strathy, M.D., Toronto.

While the cases of indigestion which end fatally show a very small proportion of breast-fed infants, yet, the treatment of disorders of digestion in breast-feeding are of primary importance, since a large number of babies are weaned for some easily remedied disturbance. It is from these babies that much of the high infant mortality arises since they are then dependent upon an usually less satisfactory diet of cow's milk or patent foods.

It is a matter of common experience that a mother, on account of some slight digestive disturbance, weans her baby without asking medical advice, and sometimes indeed the weaning is done on the advice of a physician, without seeking to remedy the condition in another way.

The breast-fed infant is brought to the physician usually for one of two reasons, either it is not thriving or else it is suffering from colic. Associated with the colic there is commonly vomiting or the stools are green.

The baby not gaining in weight, who seems well otherwise, is probably suffering from an insufficiency of milk, either in quantity or quality. When this is so, before advising treatment, the case should be gone into thoroughly and a careful history obtained. Does the babe appear satisfied after feeding or does he give up the nipple in disgust and cry with the almost characteristic wail of the under-fed infant? If possible the child should be weighed before and after feeding to determine if the quantity is sufficient. The breast should also be examined after feeding to see if it has been emptied. An estimation of the percentage of protein and fat in advantageous, but in the majority of cases is not feasible.

Having found or suspected that the quantity or quality of the milk is at fault, one reasonably turns to the source of supply —the mother. Unfortunately, however, it is in most cases impossible to materially improve the milk by altering the mother's diet. The stout or porter so frequently ordered usually does more harm than good. If the mother suffers from carbohydrate indigestion or lack of starch assimilation, malt extract or other

* Read at Ontario Medical Association, Pædiatric Section, Niagara Falls, Ont., June, 1911.

medicine with diastatic properties sometimes aid. It is in cases where the mother is overworked, tired or run down, that treatment directed to her gives the best results. Less work or a midday rest will sometimes work wonders in the milk. Or if the care of the baby during the night is delegated to the nurse and a bottle feeding substituted for the night breast feeding, the mother's milk improves in quality and weaning may be postponed for months.

However, as treatment through the mother is so often fruitless, weaning or mixed feeding must be begun in many cases. Mixed feeding is usually preferable, but is not without its difficulties. The mother frequently objects to continue breast feeding when the baby is taking several bottle feeds without trouble; and if the artificial food is very sweet the infant prefers it to the breast milk and refuses to nurse.

In many cases the loss of weight is merely an indicator that lactation is subsiding and weaning is imperative. Here let me insist on and repeat that weaning should not be ordered unless systematic examination and trial have shown it to be advisable. I know that many babies gain more rapidly from the date of weaning, but they have to face the greatly increased chances of being attacked by that scourge of infancy—gastro-enteritis. Among the poor, and in cities, this is a very live danger, and even wealth and living in the country do not confer entire immunity. A month's delay in weaning is something gained if the babe has thrived during that time, for it is common knowledge that every month of age gained makes weaning easier. The older too that the child is the greater his resistance to intestinal infections.

The treatment of the second type of cases—those with colic and other signs of indigestion—is a little more difficult. At the start let me enunciate that in the majority of cases it is not the quality of the milk which is at fault, and because the symptoms disappear when the child is weaned does not prove that the quality of the milk was at fault. Nor even if the quality of the milk is at fault does it necessarily indicate that the fault cannot be remedied without weaning.

Careful inquiry should first be made as to whether the child is nursed regularly and for about the same length of time at each feeding. Many infants are fed regularly but too frequently, so that the stomach never has a period of rest.

During the first month of life a not infrequent occurrence is that the breast is not completely emptied and milk remains in one part of it and seems to become stale there. The infant may

then show a dislike for the milk, and sometimes diarrhœa or green stools may be present. This condition is easily remedied if the breasts are completely emptied by massage and a dose of castor oil given to the baby.

An excessive supply of milk is the most frequent cause of trouble in the colicky infant. The lusty babe is the usual sufferer. Being strong, he nurses rapidly and perhaps empties the breast, at the same time distending his stomach and forcing some milk into the duodenum before it has undergone any gastric digestion. The over-distension of the stomach and the absolutely undigested milk in the bowel cause colic. If the over-feeding continues a dilated stomach will soon result. A stomach once dilated, even when the cause is removed, takes some time to return to its normal size.

A probable diagnosis of dilated stomach is difficult to make by abdominal examination, unless the stomach is previously filled with fluid. The diagnosis is only made certain by the use of a stomach tube. If the tube is passed three or even four hours after a feeding, remains of the feeding will be removed. These will show curds and excess of mucus. Mere retention of an ounce or two more than the normal content of a child of its age does not necessarily indicate a dilated organ, for several ounces may, and usually do, pass on into the duodenum.

When over-feeding is suspected to be the cause of colic, reduction of the time of feeding is usually sufficient to produce a cure, but lavage every second or third day for two weeks is an aid. If the mother's breasts are examined the milk in some women will be found to flow very much more freely than usual owing to the larger calibre of the ducts. While fifteen to twenty minutes is the average time required for nursing, I have seen babies get their full six-ounce feed in four or five minutes; if allowed to continue until satisfied the invariable results were colic and flatulence.

Where the over-feeding has caused a dilated stomach, lavage should be persisted with for several weeks. This should be done every day at first, and later every second or third day. The proceeding I need not describe in detail: it is not new, but it has yielded such excellent results where other means failed, both in cases of gastrectasis and conditions of colic, where the cause was obscure, that I would like to dilate upon its usefulness. I prefer to use for the purpose a No. 12 English catheter connected by a glass tube with a rubber tube and funnel. The baby should be laid on its side with arms and hands held against its body by a towel or blanket. The distance that the tube should be passed

is the distance measured on the surface of the body from the mouth to the umbilicus. To withdraw the fluid pass the tube in two or three inches farther, or the distance from the umbilicus to the pubes. The solution that I prefer to use for washing is soda bicarbonate, a drachm, to water one pint. The water should be warm and not hot and the stomach should be washed about three times before the tube is withdrawn.

In a large number of cases the infant suffers from colic due to flatulence, but the cause of the flatulence is obscure. Here carminatives such as dill water or peppermint water, or better soda salicylate one grain in dill or pepermint water, one drachm, and equal parts of warm water will relieve the colic. They release the gas, but do not get at the root of the trouble. An occasional dose of castor oil is also an aid.

Another cause of colic is indigestion, due to insufficiency of digestive juices. This leads to curds or fat in the stools. The indications here are clear, and the results of treatment usually satisfactory. Digestive medicines, as essence of pepsin or caroid administered with the feedings, give prompt results.

The causes of colic in breast-fed babies may be summed up under five headings: (1) irregular feeding, (2) collection of stale milk in the breasts, (3) excessive supply of milk tending to gastrectasis, (4) flatulence of unknown origin and (5) lack of digestive juices. If a systematic examination is made and the cause determined, rational treatment may then be adopted. Unfortunately, however, there are cases where all such treatment fails and weaning is necessary, but what I wish especially to impress is that this should be the final, and not the primary, method of treatment. When a babe is weaned the bridges are burned behind.

Selected Articles.

PRACTICAL NOTES ON THE ECZEMAS

By Professor L. Brocq, M.D.
Of the Faculty of Medicine of Paris.

Here is a patient who presents over the entire anterior surface of the right leg a huge eruptive patch characterized by redness of the skin—a redness that in great measure disappears on pressure. On this red patch are to be seen a number of little round or oval depressions the size of quite a small pin's head, disseminated without any semblance of order; they riddle the surface like a target that has been shot at. If we apply a cigarette paper to this surface you well see that over these depressions the paper becomes wet with exudation, and over some of them there is enough to make a fairly large stain. This exudation is of a yellowish hue and transparent. It makes the fingers sticky and stiffens linen. The patch of eruption is not sharply outlined, its edges are somewhat diffuse, and there is no strict line of demarcation between the diseased and the healthy skin, the one merging insensibly into the other.

This dermatosis is a form of eczema; indeed, we may go a step farther and describe it as the type of a variety of eczema to which we have given the name *true vesicular eczema* or common *amorphous eczema.* It is the very prototype of the objective lesion to which we have thought well to reserve the designation of *true eczema,* and which, for us, is essentially characterized, objectively, by the existence of special vesicles which are formed in Malpighi's mucous bodies, by intra-cellular œdema, which, when the process of exoserosis is sufficiently active, open externally, giving origin to these tiny depressions just referred to, and from which exudes the serum.

You see, then, that the pathognomonic objective characters are: the formation of minute vesicles irregular in size, distributed anyhow, almost always lying on an erythematous surface, usually more or less itchy, and liable to open externally with the discharge of a yellowish serum.

This objective variety is often met with following traumatic irritation of the integument, either from actual violence, damaging the skin and producing a traumatic dermatosis characterized by active redness, bright red color, abundant coarse vesicular phlyctenisation, then after subsidence of these major symp-

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provoking the eruption, just as it does in urticaria, but there are other causes of the highest importance in the pathogenesis of the affection. All the subjects who present this particular lesion suffer from renal impermeability, more or less, and in most there is pronounced gastro-intestinal fermentation. Lastly, nervous excitement, intoxications and auto-intoxications play an unquestionable rôle in the genesis of these accidents.

This does not mean that when the eczematous patches are formed the microbes of the skin do not play any part therein, influencing their duration and, it may be, their severity, but it is none the less true that among the causes that come into play the predominant factors are frequently toxic, auto-toxic and neuropathic.

The third patient also presents behind the ears, on the ears and in the præ-auricular region, red oozing areas riddled with small depressions, whence escapes the yellowish serum that stiffens linen. He, too, therefore, is suffering from eczema, but it is of quite another variety. Look at the margins of the eruption. You will note the presence of little patches of a yellowish red hue which disappear in part, but not altogether, under pressure, covered with small whitish and apparently dry fine scales. Their aspect resembles that of certain cases of superficial psoriasis, but if you scratch a spot with an exploratory curette after you have removed the superficial layer of dry scales, you will perceive a number of little rounded or oval cavities the size of the head or point of a needle, from which exudes the transparent fluid. This is the initial stage of the eruption you have before you. Here, the affection does not start, as in our first patient, by vesicles which make their appearance on healthy skin, or, as is more often the case, on an erythematous base. There is not, as in our second patient, primary production of congestive papulo-vesicles, quasi-urticarial papulo-vesicles. The initial lesion is a sort of red patch covered with scales, and it is on this base that the vesicles form. These are very important details, for if properly grasped they enable us to lay down the general and local treatment in a vastly more satisfactory manner.

The eruptive variety, of which I now bring an example before your eyes, is closely allied to psoriasis; in fact it seems to constitute a sort of hybrid between that affection and true vesicular eczema. It is difficult to make sure whether or not microbes play an important pathogenetic rôle therein. There is a skin disease very similar to the one under consideration, but in pure cases perfectly distinct, both from the point of view of evolution and

objectively, a disease known long since, commonly described under the name *flannel eczema,* acneiform eczema, seborrhœa corporis, circinate seborrhœic eczema, lichen annulatus, serpiginous circinate seborrhœic eczema, and so on. It is characterized by its distribution on the anterior surface of the chest, in the præ-sternal region, in the inter-scapular spaces, and on the scalp, by the production of little circinate figures with a yellow, depressed centre, the periphery being rather fine, of a pinkish red hue, prominent, squamous or squamo-scabby, which figures may run together forming more or less elegant gyrate designs, or, it may be, by circumpapillary papules and by the facility with which these accidents disappear under the influence of iodine, washing with camphorated alcohol, sulphur or mercurial ointments, etc. There is not the shadow of a doubt that we have here a microbial dermatosis, but here again the eruptive form we are studying at this moment is something quite different, and though it has been confused with the medio-thoracic dermatosis it is simply because it often co-exists therewith.

It is therefore possible that microbes play a certain part in the genesis, and especially in the persistence, of these affections, but they would also seem to be under the empire of vices of nutrition, and often, as in the forms of psoriasis with which they are so closely related, an excess of nitrogenous food may help to facilitate their development and prevent their disappearance under the influence of local medication, besides provoking relapses.

You see, then, gentlemen, that without wishing to systematize—for to be over-schematic would be a clinical error—the precise diagnosis of the objective form of eczema that you are called upon to treat will give you forthwith certain general indications in respect of the proper treatment to employ.

In presence of a case of common, so-called amorphous, eczema, your first care must be to protect against any cause of irritation. In presence of papulo-vesicular eczema we must inquire into the state of the kidneys and the organs of digestion and the nervous system, while, if called upon to deal with a case of seborrhœic eczema, we must limit the intake of albumen, especially that of animal origin.

But it must not be forgotten that these several varieties seldom exist in a pure state; they are often associated, and are superposed, thus rendering the differential diagnosis somewhat difficult.

The local treatment also differs to some extent according to the particular variety of the disease with which we are dealing.

We must, however, bear in mind that individual predispositions intervene pretty frequently, and that before employing powerful remedies it is well to test the sensitiveness of the subject.

Common amorphous eczema may get well of itself by the aid of simple protective applications which protect the part from external contact. Ointments, varnishes, or simple dusting powders answer this purpose. In eczema of external or traumatic origin, when individual susceptibilities do not come prominently into play under the influence of the traumatism, this simple treatment yields good results. It is inadequate when other pathogenic conditions than merely local irritation come into play, and when the damaged part is infected by pyogenic microbes.

In the first case we must intervene in the direction of regulating the diet, the mode of life, by remedying the defective functions of the various organs and of the nervous system, but in addition we can exert a powerful local action on the exoserotic process by applications of coal tar, which is the prototype of drying, anti-pruriginous applications.

In the second case, we must act upon the infected surface by means of local applications, the efficacy of which in obstinate, because infected, cases of eczema has been advanced as conclusive evidence of the microbial nature of the disease, such for instance, as painting with nitrate of silver, from 1 in 100 to 1 in 50; Alibour water (Cupri sulph. dr. iiss.; Zinci sulph. dr. ix.; Camphoræ dr. i.; Pulv. Croci dr. ss.; Aquæ fl. oz. xl.), diluted with five or six times its volume of water; wrapping in lint steeped in very much diluted Alibour water or aqueous solutions of ichthyol, 1 in 30 to 1 in 5.

Papulo-vesiculous eczema, during the ascending periods of the acute outburst, is usually very intolerant of treatment, and if we imprudently employ powerful topical agents while the integument is still in a state of active congestion, we run the risk of aggravating the eruption and provoking œdema, which may become generalized. It is, indeed, in this state that the patients usually come to us at the hospital. Seeing that an outburst was impending, they apply the remedies that were recommended to them on some previous occasion to clear up the remains of old-standing eruptions. Consequently, during the acute stage we must only apply inert powders, fresh cold cream, or lard. If there be much scabbing and œdema, wrap in lint steeped in boiled water. Later on, when the congestive tendency is less marked and the œdema has all disappeared, if there be no superadded infection, and especially at a time when the eruption has

assumed the aspect of nummular eczema, crude oil of tar, either pure or mixed with caseine varnish, gives excellent results.

Seborrhœic eczema provides an easy triumph for active local treatment. It sometimes becomes irritated under a coating of thick zinc paste, but if we mix thiogenol, ichthyol, thiol, sapolan, or wood tar with the paste, it will in most instances rapidly improve. In these cases coal tar is not particularly efficacious, though it may serve to dry the damaged tissues. When this effect has been obtained, it exerts no further influence on the disease itself.

To bring about its disappearance we must have recourse to the above-mentioned remedies, and in obstinate cases, as, for instance, when the scalp is invaded, to preparations of the yellow oxide of mercury of mineral turpeth in association with the preceding substances.

But please note that things do not always happen with this regularity. Certainly the rule is to commence with mild remedies, such as a 1 in 10 paste of ichthyolate of zinc, gradually rising in the scale of local applications until we find one that determines the total disappearance of the mischief. Pretty often, however, while we are taking stock of our subject, fresh outbreaks occur, the efficacious applications cease to be tolerated, we get weeping and tumefaction, and for a time the patient may become intolerant of treatment of any kind.

It is under these circumstances that the exercise of much tact and patience on the part of the doctor is called for, and not less resignation on the part of the unhappy patient. We must revert to the sedative treatment by inert powders and moist wraps, at the same time making complete analyses of the excreta, so as to be enabled to introduce the necessary changes into the dietary, along with internal medication (diuretics, laxatives, opotherapy, etc.) suitable to the particular morbid phase.

In short, in seborrhœic eczema limited to one region we may reasonably promise the patient a fairly rapid cure under appropriate and sufficiently active remedies. But when seborrhœic eczema presents acute inflammatory reactions, when it displays a tendency to rapid generalization, when it occurs in subjects in whom nutrition and elimination are vitiated, especially at the period of adolescence or the menopause, we must be much more guarded in giving a favorable prognosis.—*Medical Press and Circular.*

RADIUM IN INOPERABLE CANCER OF THE CERVIX UTERI *

By H. Rubens-Duval and H. Cheron.

The writers have treated many patients suffering from cancer of the cervix uteri by the more penetrating rays of radium. In general they have produced great amelioration. In some cases the lesions cicatrised and the patients recovered strength and the appearance of perfect health, which was maintained for several months. Some of the results are possibly permanent. In one case radium was last applied on Feb. 17, 1910, and since that time there have been no signs or symptoms of the disease. Cancerous masses regressed, ulcers healed, hæmorrhage and fœtid discharges ceased, the general condition improved, and the weight was gained. As soon as the regression, though only partial, was sufficient to allow the cancerous uterus to be removed, this was done, as the risks of hysterectomy were thought less than those of dissemination of the disease while further local regression was being attempted. But hysterectomy was not always possible, for sometimes the sclerosed uterus and vagina remained intimately adherent to the bladder and rectum. Then radium therapy alone is possible and should be followed until cicatricial tissues are obtained in which examination no longer shows any cancerous manifestations. Several patients are under observation in whom the treatment has been stopped because the cancer appears to have completely disappeared.

More cogent than the clinical evidence was the microscopic examination of specimens in 9 cases. Two specimens were obtained post mortem—from a patient who had died from intercurrent infectious endocarditis and from one in whom the treatment was stopped because of generalization of the disease. The remaining 7 specimens were obtained by hysterectomy in cases rendered operable. In 4 of these cases the cancer was regressing, but was sufficiently extensive to be recognizable by the naked eye. The specimens showed destruction of the cancerous cells under the influence of the radium rays.

The first patient who was operated on was under the care of Dr. Lejars, who reported the case as follows at the Société de Chirurgie on June 8, 1910. "A woman, aged 47, was sent to me at the end of 1908 with a large epithelioma of the cervix uteri extending into the anterior fornix and complicated by peri-

* Bulletins de la Societe Medicale des Hopitaux, July 28, p. 177.

uterine infiltration. The case appeared inoperable and radium was applied thrice at intervals of a month. An apparatus containing 5 centigrammes of the radium salt was left in the cervical cavity for 20 hours on each occasion. A fortnight after the last application the fornices were more supple, the cervix had diminished in size, and I could then operate. On March 25, 1909, under good conditions I performed total abdominal hysterectomy with extensive resection of the vaginal wall. The patient recovered and remained in good health for a year, but recurrence then followed.''

A woman, aged 45, came to hospital in January, 1911. She had lost flesh and complained of hæmorrhage from the vagina. The cervix uteri was much enlarged and covered with friable vegetations, which bled abundantly. The fornices were infiltrated behind and on the left, and also the base of the left broad ligament. Microscopic examination showed that the growth was an epithelioma. On January 18 24 centigrammes of radium and on February 16, 20 centigrammes were applied to the cervix, rather than introduced into the cervical canal, which could be dilated only in its lower part, and were left in position for 21 hours on each occasion. On March 21 the fornices and broad ligaments were supple and the uterus was of normal consistence. There was still in the posterior fornix a small hard nodule. The uterus was mobile and the case was considered operable. In April hysterectomy was performed. Convalescence was uninterrupted and the patient was sent to the country. When seen last, on July 22, the cicatrices of the operation were perfect and the general condition excellent, but she complained of pain along the right sciatic nerve which was thought to be due to compression of its roots by a growth. Examination of the specimen removed showed that the uterine and the periuterine lymphatics were stuffed with cancerous cells which were free in the lumen. Such early and extensive invasion of the lymphatics is exceptional.

Of the 5 remaining specimens 2 showed complete absence of cancer in the uterus, vagina, and broad ligaments. In the other 3 the absence of cancer in the cervix contrasted with a focus in the body of the uterus near the isthmus, as in the following case:

A woman, aged 36, came to hospital on October 8, 1910, complaining of hæmorrhage and a fœtid serous discharge. The cervical canal was open and allowed the introduction of a finger. It was ulcerated and covered with vegetations which projected into the vagina. The cervix was mobile, although it was adherent to the left vaginal wall, and the left broad ligament was

infiltrated with a mass of the size of an egg. In front and behind the cervix the vaginal mucous membrane was invaded for a slight extent. Microscopic examination showed that the growth was an epithelioma. The case was considered inoperable. Radium was applied on October 8 and on November 7 and 21. From October 28 the hæmorrhage ceased, and the serous discharge diminished in amount and fœtidity. The vagino-uterine ulcers became cleaner and showed a tendency to heal. On December 6 the cervix was movable, but dragged to the left by retraction of the broad ligament. The os was almost closed and the walls of the cervical canal were smooth. The cervix was entirely destroyed behind and on the left side, and was adherent to the left lateral wall of the vagina. The vaginal mucous membrane, which had presented cancerous ulceration in front, behind, and on the left side, showed only sclerosed thickenings. The mass in the broad ligament had disappeared. The patient had gained flesh and had a good appetite. Clinically there was no longer any neoplastic tissue. After several months of good health she again lost flesh and suffered from abdominal pain. It was thought probable that there was metastasis in the abdomen. On April 29, 1910, hysterectomy was performed and an inoperable growth of the sigmoid flexure was found. Numerous sections of the specimen showed no cancerous cells in the cervix, body of the uterus, broad ligaments, or appendages except at the margin of the uterus on the lower part of the body, where two dilated lymphatics were found filled with active cancerous cells. The radium had caused complete regression of the growth which infiltrated the cervix, part of the vagina, and the left broad ligament, but had not influenced the more distant growths.

A woman, aged 60, was found, on February 28, 1911, to have an inoperable cancer of the cervix uteri. Its left side was destroyed, and its right was nodular and indurated. The growth extended into the posterior and left lateral fornices, which were thickened and indurated. The uterus was slightly movable from before backwards, but immovable laterally. The vaginal examination caused an abundant discharge of fœtid blood. Rectal examination showed that the uterus was slightly retroverted and enlarged. Its posterior surface was nodular and indurated at the isthmus. The left lateral ligament was wanting in suppleness and appeared to be infiltrated. Microscopic examination showed that the growth was an epithelioma. On February 28 the cervix was dilated with Hegar's bougies and 15 centigrammes of radium, contained in a silver tube $\frac{1}{2}$ mm. thick and surrounded by 15 layers of gauze, were inserted and maintained in position for 24 hours. A discharge tinged with blood followed, and after

some days became slight and colorless. After this all hæmorrhage ceased. On March 24 24 centigrammes of radium in a leaden tube 1½ mm. thick were inserted in the same manner as before. The cervix was of almost normal consistence but irregular, and its posterior lip was almost completely destroyed. The dilatation with Hegar's bougies caused only a slight hæmorrhage. On April 25 the cervix was retracted and atrophied, the fornices were supple, the uterus was mobile and the case was considered operable. On May 3 hysterectomy was performed. The uterus was a little adherent behind and was liberated with scissors. The left lateral ligament was thickened and of firm consistence. The uterus was firmly adherent to the bladder, of which it was necessary to resect a small portion. There were enlarged glands on both sides and one on the left side was very large. These were removed. The cervix consisted of lardaceous tissue which was continued into the left lateral ligament. The latter was transformed into a fibrous mass. The body of the uterus was free from growth or sclerosis. The removed lymphatic glands seemed, for the most part, to be simply inflamed, but the large gland on the left side contained a cancerous nucleus which was softened in its centre. In spite of minute examination of numerous sections a single living epithelioma cell could not be found in the vagina, uterus, or left broad ligament. Even remains of destroyed epitheliomatous cells were scanty. However, here and there were some horny lamellæ surrounded by giant cells. The left lateral ligament was transformed into a mass of fibrous tissue in which not the slightest cancerous element could be found. The lymphatic glands were simply inflamed except the large one, which was extensively invaded by cancer in full activity. It was too far from the apparatus to be influenced by the radium rays. The prognosis was therefore guarded. If the radium had been used before the glandular invasion, cure could have been obtained since the cancer had disappeared from the other parts.

These cases show that the vaginal or intrauterine application of radium is capable, in certain cases, of causing complete disappearance of cancer infiltrating the uterus, vagina, and even the broad ligaments. But it cannot affect cancerous lymphatic glands or distant foci of cancer. Some of the cases show (for example the third case) that if the disease becomes operable it is unsafe to trust an apparent cure, since a uterus, perfectly cicatrised and even to the naked eye free from cancer, may contain a focus which may lead to a relapse. As soon as a case becomes operable hysterectomy should be performed.—*The Medical Review.*

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, F. A. CLARKSON, BREFNEY O'REILLY AND F. C. HARRISON.

Novojodine

Drachter (*Zentralbl. f. Chirurgie*) describes the use of novojodine as a substitute for iodine in surgical tuberculosis. Novojodine, with the formula $C_6H_{12}N_4I_2$, is mixed with equal parts of talc, and forms a light brown powder, without odor, insoluble in the usual solvents. In addition to other preparations, it can be obtained as a 5 per cent., 10 per cent., or 20 per cent. novojodine gauze. Novojodine in contact with the tissues splits into iodine and formaldehyde. Schattenfroh found that in blood serum, pus, and physiological salt solution, in dilutions of 1 in 1,000, it has a strong disinfectant action superior to that of iodoform. The present author has tested novojodine clinically, principally in tuberculous diseases, especially of the bones and joints, and also in tuberculous fistulæ and abscesses of the soft parts. In open tuberculosis with suppuration novojodine was found to reduce the amount of pus and to aid in quickly drying up the wound and in the formation of healthy granulations. Tuberculous wound cavities were either filled with a suspension of novojodine or packed with novojodine gauze, and almost invariably the treatment led to a cessation of the suppuration. The author has invariably had good results in the treatment of open-joint tuberculosis. Novojodine is to a high degree deodorant in its action, a peculiarity due to the action of the formaldehyde. This deodorant action was very marked in a case of gangrenous appendicitis. The preparation seems to be altogether non-irritant and non-poisonous. Even used in large quantities for small children there were no unpleasant side-effects, and animal experiments also showed the harmlessness of the drug. Novojodine is stable in the dry state at ordinary temperatures, but is decomposed at high temperatures. It is considerably cheaper than iodoform.—*Brit. Med. Jour.*

Radium Emanations in Gout and Arthritis

Gudzent reports the results of three years' work in this line at the first university medical clinic at Berlin, in charge of His. The radium emanations have been applied in 400 cases, generally in the form of inhalation in a closed room, for two hours a day, with from twenty-four to thirty-six sittings, supplemented by injections of soluble radium salts in the vicinity of the diseased joint. Complete bed rest, he says, aids materially in the cure, not even massage should be applied until all pains and swelling have subsided. This treatment is supplemented by the ordinary measures, superheated air, electric light and brine baths, etc. The prognosis depends naturally on the existing anatomic changes. Arthritis in children responds particularly well to the radium treatment while arthritis in the senile is scarcely influenced as also true tuberculous and syphilitic arthritis. The discovery that the springs which for ages have had a reputation for curing gout were particularly radio-active led to application of the radium emanations in treatment of gout, and with considerable success. Fifty of the 100 gouty patients thus treated allowed blood to be drawn for re-examination later, and in thirty-seven of these fifty, all traces of uric acid had vanished from the blood. Before commencing treatment the blood had contained from 6 to 13.7 per 1,000 sodium mono-urate. There is generally an exaggeration of symptoms at first, but in the third and fourth week great improvement and relief parallel the disappearance of the uric acid from the blood. In very old inveterate cases with severe arthritic changes the local reaction might be too severe, and this class of patients is excluded from the radium treatment. Re-examination of the blood of two patients a year after the course of radium treatment showed it still free from uric acid.—*J. A. M. A.*

Dangers of Menthol Preparations in Infants

(*Semaine Medicale.*) Recently P. F. Armand-Delille directed attention to the production of symptoms of asphyxia in infants by the nasal instillation of oily solutions of menthol. In a child, aged 3 months, suffering from bronchitis, 2 drops of mentholated oil were introduced into the nostril from a warmed teaspoon, the infant lying on its back. The child was immediately seized with spasm of the glottis, which persisted for 50 seconds, during which there was complete apnœa and marked cyanosis. A bath at 104° was given, when a few inspirations followed, but such abundant

secretion of mucus occurred in the naso-pharynx that it was only after it had been mopped out several times that respiration was possible. It was only after a second bath that normal respiration was established, the condition lasting about 15 minutes. Malibran has observed spasmodic symptoms of an alarming character in a child of some months from the same cause.

Two similar cases have been observed by L. Mayet. In the first a girl, aged 4 months, was seized with asphyxia on the introduction of menthol in vaseline into the nostrils. For about 10 minutes she appeared to be dying, and it was only after an hour's treatment by mustard baths, artificial respiration, and aspiration of mucus from the nostrils that danger was averted. In the other case, in a girl, aged 10 months, the instillation of a few drops of a 2 per cent. solution of menthol in oil provoked hypersecretion of thick mucus, which completely obstructed the pharynx and probably also the larynx.

In Germany a similar case has been recorded by W. Koch. The nostril of an infant, aged 3 weeks, suffering from acute coryza, was mopped out with a tampon of wool moistened with a preparation of menthol. The child was immediately attacked with symptoms of asphyxia, complete apnœa, and cyanosis. At the same time there flowed from the mouth an abundant white frothy secretion, and it was only by the constant removal of this and artifificial respiration for about half an hour that the symptoms ceased. That the symptoms in this case were due to the menthol and not to mechanical irritation was shown by the fact that mopping the nostrils by a similar tampon without menthol caused no inconvenience.—*The Medical Review.*

Inversion of the Radial Reflex

At a recent meeting of the Société Médicale des Hôpitaux, Dr. Babinski reported an alteration in the radial reflex which he has met with in a particular class of patients suffering from lesions of the cervical spinal cord. Normally, percussion of the inferior end of the radius brings about a simple flexion of the forearm on the arm. When the tendon-reflexes of the upper extremity are well marked, other movements, especially that of flexion off the fingers, may accompany flexion of the forearm. This is generally the case in patients suffering from hemiplegia of cerebral origin. In the healthy individual, however, the fingers alone are never seen to flex as the result of a radial shock. But this sort of transposition of the normal reflex move-

ment, which the author proposes to call "inversion of the radial reflex," occurs sometimes in certain pathological circumstances. He has met with it in patients suffering from lesions of the cervical spinal cord, including syringomyelia and tumors, and up to the present has never noticed it in affections situated elsewhere. He believes that this inversion of a radial reflex is the result of a lesion affecting primarily the fifth cervical segment. From his observations he concludes that this sign by itself is sufficient to prove the existence of a lesion of the cervical spinal cord, and that it may help in the localisation of the injury.—*The Hospital.*

Morphological Blood Changes in Goitre and Basedow's Disease

Carpi says (*Berliner Klinische Wochenschrift*): 1. Leucopenia is not a constant symptom in Basedow's disease. 2. Lymphocytosis is one of the more frequent symptoms in Basedow's disease, yet cases are met with in which lymphocytosis is absent, and it cannot be said to be a constant condition. 3. A typical lymphocytosis has been observed in myxœdema with lymphoid metaplasia of the bone marrow. 4. In simple goitre without thyreotoxic symptoms lymphocytosis has been observed, and it may reach a high point. From these facts it follows that a characteristic and constant condition of the blood of positive diagnostic importance does not exist in Basedow's disease. Lymphocytosis, with or without leucopenia, is to be considered as a general symptom in thyreotoxic diseases.—*New York Medical Journal.*

Arteriosclerosis and the Palpability of the Arterial Wall

Fischer (H.) and Schlayer (*Deutsches Arch. f. klin. Med.*)

It has been commonly assumed that palpability and sclerosis of the arteries go hand in hand, and that a sclerotic artery is inelastic. How far these beliefs are justified appeared doubtful, and the authors have investigated and compared the palpability of the radials, brachials, femorals, and carotids ante-mortem with the microscopical characters of these vessels in the same patients post-mortem in 20 cases. The palpation was made by Prof. Romberg. The results of the comparison are surprising. It was found that palpability and intimal change bore no relation to one another; a soft artery might have advanced intimal change, a hard artery a normal intima; in 45 arteries with

marked palpability the intima was practically normal, and in 15 arteries with very marked palpability (but no renal disease) the intima was similarly normal. In sum, in only 5 out of 20 patients with very marked arterial palpability was the intima affected. The authors found no thickening, sclerosis, or calcification of the media to account for the excessive palpability of the arteries either, though they point out how very difficult it is to say from examining microscopical sections whether any given artery has or has not a thickened media. They conclude that it is functional activity or spasm of the media that causes this arterial palpability, and quote cases to show that in fever a hardened artery may cease to be palpable; the spasm may last for months or years, and is perhaps a precursor of arteriosclerosis. Juvenile sclerosis is probably of this functional type.—*Medical Chronicle.*

Nephritis in Basedow's Disease

Graupner (*Muenchener med. Woch.*)

The writer records the occurrence of a severe form of nephritis in two cases of Basedow's disease, in which death took place soon after removal of part of the thyroid. The cases presented, in addition to hyperplasia of the thymus, of the neighboring lymph glands, spleen and bone-marrow, marked degenerative changes in the kidneys. In one case, which died 26 hours after operation, the cortex of the kidneys showed scattered necrotic areas, the epithelium of the straight tubules being specially affected so that in parts necrotic streaks replaced the medullary rays. The cells of the convoluted tubules showed fatty change. The necroses extended into the boundary zone of the medulla. In the other case, which died 18 hours after operation, there was no definite necrosis, but the tubules showed marked fatty change. One case was operated upon under local anæsthesia, the other under chloroform. He mentions another case recorded by Schmorl, in which similar changes were found, death having occurred suddenly in the course of Basedow's disease without any obvious cause. This nephritis is apparently due to an endogenous poison, the source of which is probably the thyroid, but which may possibly be derived from the thymus or from some other organ. The lymphatic hyperplasia seems to be a protective effort, such as occurs in infective conditions.—*Medical Chronicle.*

OBSTETRICS AND GYNAECOLOGY

IN CHARGE OF ADAM H. WRIGHT, K. C. M'ILWRAITH, FRED. FENTON, AND HELEN MACMURCHY.

Vomiting of Nurslings

Cheinisse recalls that much of the so-called vomiting of nurslings is mere regurgitation without nausea; the Germans speak euphemistically of children subject to such mild attacks as *Speikinder* (droolers). The infant stomach differs greatly from that of the adult; after feeding, a mere change of position may cause the stomach contents to be ejected. Control of overfeeding is an obvious remedy, but many cases will not yield to such a simple measure. There are also vomitings of underfeeding where the bodily condition of the infant should aid diagnosis; increasing the amount of milk to the normal helps these cases. A qualitative insufficiency of the nurse's milk is sometimes the cause of vomiting; artificial feeding should then supplement the breast. Weak solutions of cocaine have been used in pylorospasm. Pyloric stenosis may require surgical intervention, but it sometimes yields to underfeeding, to hot poultices on the epigastrium, to minute doses of atropine, and to gastric lavage, which must be begun with great caution to guard against collapse.—*Med. Record.*

Pyelitis During Pregnancy

Ernst Venus (*Wien. klin. Runds*) reviews the literature on the subject of pyelitis during pregnancy. The etiology of pyelitis gravidarum is not yet established with certainty. Probably infection may be either an ascending infection from the bladder, or may be by way of the blood vessels or the lymphatics, the customary infection being the ascending one. Albeck found that in some cases considered to be pyelitis in pregnancy pus had been present before pregnancy began, and Kermanner looks upon the condition as often only of the nature of an acute relapse of a latent colipyelitis. Bacteriuria may exist without pyelitis, and it is certain that damming back of the urine plays a great part in the production of pyelitis. The *Bacillus coli* is the most frequent infective organism, but staphylococci, streptococci, and *Bacillus proteus* are often found. The symptoms and course of a pyelitis

of pregnancy are, as a rule, somewhat typical, and the diagnosis is usually not difficult if cystoscopy and catheterism of the ureters are carried out. Appendicitis, cholelithiasis, threatened miscarriage, and paranephritic abscess are the conditions to be considered in making a differential diagnosis. The prognosis for the mother is, as a rule, good as far as her life is concerned, but not so absolutely good with regard to complete recovery. The prognosis for the life of the child is usually unfavorable, but is better the nearer to the end of pregnancy the pyelitis sets in. The treatment is in the first place conservative. Catheterism of the ureter and lavage of the pelvis of the kidney are indicated in all severe cases. Artificial interruption of pregnancy only comes into question in the rarest cases, and is only indicated in severe degenerative processes in the kidneys.

Stay in Bed After Abdominal Operations

Cosentino (*Gazz. degli Osped.*, July 2nd, 1911) believes that patients are kept in bed for an unnecessarily long period after abdominal operations. For the last year he has tried a different method, and as the result of his experience is convinced that a long stay is unnecessary. Most of his patients—he gives brief details of 30—were up on the eighth to twelfth day, and without suffering in any way. The advantages of a shortened period in bed are sufficiently obvious. Others have suggested a shorter period, but the author is not in favor of that.—*B. M. J.*

The Influence of Exophthalmic Goitre on Pregnancy and the Child

Far from being an obstacle to conception, exophthalmic goitre would seem, to a certain extent at least, to favor fecundity. This fact, which at first glance appears surprising, because, according to many writers, atrophy of the generative organs is not infrequent during the progress of this process, is made evident from the facts collated by Chapu (*Thèse de Paris*, 1910). He finds that many women afflicted with Basedow's disease have had large families.

The influence of exophthalmic goitre on pregnancy cannot be exactly estimated because the facts are in themselves discordant, but it is apparent that the affection in no way prevents a perfectly normal pregnancy and that premature labor is infrequent. Generally speaking, labor is normal.

On the other hand, the influence of pregnancy on exophthalmic goitre is manifest, as it not infrequently causes the appearance of the disease, while it can transform a simple goitre into one of the exophthalmic type. It may also aggravate or improve Basedow's disease. Consequently, the conclusions arrived at by various clinicians are quite at variance. Trousseau and Charcot advise marriage; Thielhaber absolutely prohibits it, while Bonnaire allows it under certain reserves.

All neurologists agree that heredity plays an important part in Basedow's disease, but a less known fact is the high mortality of the children born of exophthalmic goitre subjects. The heredity is at times similar, that is to say, the child is born with a goitre which later on changes into the exophthalmic type, while at other times there is heredity of transformation, the child developing hysteria, epilepsy, chorea, neurasthenia, or mental disease. And, lastly, it appears that besides nervous heredity one encounters frequently in the descendants other pathological stigmata, such as tuberculosis, congenital debility, or dystrophies of the osseous system.—*N. Y. Med. Jour.*

OPHTHALMOLOGY AND OTOLOGY

In Charge of J. T. Duncan.

Ocular Complications of Measles

Brose (*Lancet-Clinic*) details the following treatment for ocular complications of measles:

In catarrhal conjunctivitis, when mild, you darken the room and either omit local treatment or order a simple collyrium of 2 per cent. boric acid with adrenalin. When there is much secretion and gumming of the lids after sleep, an ointment of boric acid may be rubbed along the lid margins at night and during the waking hours cold compresses of boric acid applied, with instillations three times daily of a collyrium of protargol, 1 to 2 per cent. Should the catarrhal inflammation show tendency to chronicity, you substitute for the protargol an eye-water containing zinc sulphate, one-half grain to half fluid ounce of distilled water. For phlyctenular disease, finely triturated calomel is dusted into the eye daily. After the irritation has somewhat subsided, you may substitute an ointment of the yellow oxide or the white precipitate of mercury, strength one grain to one and one-half drams of vaseline, for the calomel, care being taken, however, if you wish to avoid irritating the eye too much, to instruct the pharmacist to rub the mercury on a glass plate to an impalpable powder before incorporating with the vaseline.

General treatment is not to be overlooked, and it is well to begin with calomel in broken doses, combined with the yellow sulphuret of antimony. Later, iron, iodine, cod-liver oil and hydropathic measures, with exercise in the open air, have their value. Because of the great tendency to recurrence, the diet must be supervised and sweets and starchy foods restricted.

The Practical Treatment of Acute Middle Ear Disease is dealt with by R. A. Fenton before the Portland Medical Society:

Cases seen here commonly arise from a coryza or from a chronic nasopharyngitis—"acute cold" or "nasal catarrh" so-called, in which infectious particles enter the Eustachian tube during swallowing, coughing, blowing the nose or clearing the pharynx of mucus. These germ-laden particles carry their irritant and inflammatory action along the tubal mucosa at a speed varying with the virulence of the toxin and the force of their introduction, producing exudation and swelling, with consequent

pain and dulness of hearing, and the added danger of infection of the accessory cavities about the ear-drums. Most potent agents of such invasion are the toxins of scarlet fever, measles or diphtheria, especially in the presence of adenoids. A rather common type is attributed to the entrance of water into the external auditory meatus while swimming, but comes more probably from expulsive efforts at clearing the nose and throat at such times, with resulting Eustachian involvement.

The laity proceed to blow tobacco smoke in the troublesome member, or pour it full of laudanum and sweet oil; and sometimes it gets well. But sometimes it does not. What are we to do when such cases come before us?

The whole matter of treatment may be summed up in three words—immediate, free drainage. But we must know what to drain, and how and when to do it. When the process has not passed beyond the Eustachian tube a simple inflation by Politzer's method often suffices to clear the hearing and allow the products of inflammation to return to the throat. But discretion must not be exceeded by blowing these products further into the ear. This is a real danger, which should limit the employment of this measure to the specialist.

The tympanic membrane must be examined by reflected light with a head mirror and speculum, a process with which all physicians should be familiar. The normal, pearly grey, with sharp light reflex, will be found, according to the stage of the ailment, to become pink, reddish or blood-hued, with a gradual obliteration of the usual landmarks and bulging of the mobile parts of the drumhead.

With a mild reddening, much relief is often had by instillations of hot sweet oil, as commonly used; hot glycerine is better, often carbonated slightly for its analgesic effect. Occasionally irrigations with hot boracic acid or 1-10,000 bichloride of mercury solutions are useful in this stage. But with much pain, redness and swelling, the ear-drum should be opened at once, and the retained serum or pus evacuated. This operation is harmless, and its results are immediately and finally good.

Paracentesis of the drum membrane is rarely made less painful by any local anæsthetic, but is fortunately instantaneous if rightly done. The point of greatest swelling is usually incised, with due care to avoid important intratympanic structures; the cut lies most often in the posterior and inferior quadrant.

The discharge that follows, serous at first, in some cases thick and purulent very early, may be removed, if copious, by syringing gently with a soft-nozzled rubber bulb and warm solution.

Hard syringing only endangers result by driving the discharge deeper in. In most cases, therefore, we find that removal of the secretions, by mopping them out with long cotton wicks twisted on fine applicators or toothpicks, will promote earlier healing. A discharge may be overlooked by those caring for the patient unless so copious that it runs out in sight. The ear should be kept dry. The discharge shares many of the characteristics of acute nasal exudates: first, serous or blood-stained; later, mucoid, and purulent, as the internal epithelial destruction and leucocytosis progress. Often a few days or weeks will see the pus diminish as it is carefully removed, without the opportunity of putrefying in the ear. It reverts to mucus, then to serum; then disappears with healing of the wound in the drum. Occasionally, with imperfect cleansing or very severe infection, sloughing may leave a perforation, but this happens far oftener when spontaneous rupture is permitted.

Responsibility for all complications rests squarely with the doctor in charge. They may be averted with comparative ease, if watched for. In passing, it may be noted that certain ill-defined febrile states in infants, "teething" included, may be due to undiagnosticated middle-ear infection, leading on even to meningeal involvement or to resolution, with more or less permanent loss of hearing. And conversely, at times an acute infectious disease like measles begins with an otitis, in which the fever fails to fall after paracentesis, diagnosis being certified by appearance of the rash.

Eye Strain

After speaking of the fact that, before civilization had advanced to its present state, the human eye was used almost wholly for distance, G. H. Wright (*Yale Medical Journal*) says:

Now think how different are the functions of the eye in a civilized community. We have learned to read, write, and sew; we spend most of our time working at something that is less than two feet from our eyes, and even when not at work or reading, we are usually in a house or on a crowded street, so that our accommodation is scarcely ever relaxed except during sleep. We live by artificial light for several hours every night, gazing much of the time at fine type or other minute objects, each of which must be discerned accurately, and glancing from one to another with incredible rapidity.

These new conditions are of extremely recent origin. The first kerosene lamp dates from 1856. Reading is an ancient art,

but was practised by the few; the immense majority of mankind were illiterate until the last century. Students, artists and musicians paid the penalty of abusing their eyes then as now. Literacy was always supposed to entail a feeble physique; the student was "sicklied o'er with the pale cast of thought," and the traditional eccentricities of genius were attributed to the fact that much learning made men mad.

The eye is able to meet these new and exacting demands only by great efforts, and the small optical defects, once of no importance, now tell heavily against it. This is especially true of astigmatism. The slight blurring caused by small degrees of astigmatism would seem to be of no importance, but we have seen that nature demands the most perfect vision obtainable, at whatever cost. The eye, therefore, continuously corrects these errors, but evidently with great difficulty, as shown by congestion and exhaustion of the eye, headache, or various reflex symptoms in the bowels, stomach, or brain.

We may have an almost infinite variety of remote symptoms due to nervous exhaustion. Frequent headache, when not due to obvious pelvic or renal lesions, is, in an overwhelming majority of cases, due to eye strain, which is also responsible for many cases of nervous prostration, hysteria, recurring bilious attacks.

Or the effect may be psychical, producing ill-temper, excesses or criminal tendencies. Backward and incorrigible children nearly always have poor eyesight, or nasopharyngeal obstruction, or both, and correcting these conditions will save very many of them.

Now, as to treatment, which means the prevention of eye strain. Everyone reading or doing fine work should have good light, properly placed, and the book or work at a proper angle and distance from the eyes, and all refractive errors which cause any symptoms should be corrected by properly fitting glasses.

For glasses to fit properly three things are necessary; the prescription must be properly written, the lenses must be correctly ground according to the prescription, and the frames must be accurately adapted to the face.

As to the prescription. The objective tests with the retinoscope or ophthalmoscope are not sufficiently delicate to be of much value. (I am speaking of refraction only, not of eye diseases, of course.) Extreme accuracy is necessary, and this can only be obtained by the subjective test. Now, the eye is able, as we know, to adapt itself to a wide variety of conditions, and so can adapt itself to a variety of glasses, and vision is keenest

when the ciliary muscle is contracted. Therefore, when no cycloplegic is used, the patient usually calls for an insufficiently convex glass. Accordingly, the optician, or "eyesight specialist," as they call themselves, treats simple hyperopic astigmatism with a concave cylinder instead of a convex one; he prescribes too weak a glass for compound hyperopia and too strong a one for myopia. These glasses give keen vision, but often produce disastrous eye strain. This is supposing that the optician is careful and conscientious; but they are often grossly careless and commit the most ludicrous blunders.

To prevent the eye from thus adapting itself to whatever glass is placed before it, we instil a drug which temporarily paralyzes the ciliary muscle, and then, with the eye absolutely at rest, we try one glass after another until we find exactly what the refractive error is. A second test two or three days later enables us to say exactly what glass the eye requires.

The first requisite then for a reliable test is complete cycloplegia. Without it the best oculist is liable to make the same errors as the ignorant optician. The next requisite is a thorough and conscientious examination, and the third is that the trial lenses be correctly marked.

After the prescription is written, the next step is to get it filled correctly. I do not believe that there is an optician anywhere who can always be trusted to do this, so it is necessary to examine the glasses oneself before giving them to the patient.

Having gotten the correct glasses, it remains to suspend them accurately before the eyes, and this is also a delicate and important matter.

This means that we must see the patient on at least three different days—for the cycloplegic test, for the second test, and to adjust the glasses to the face. From one to three additional calls may be necessary.

Editorials

THE NATIONAL INSURANCE ACT

In our last issue we published a short article respecting the strong opposition to the new Act from the profession in Scotland. Reports during the last month indicate a very bitter opposition in all parts of Great Britain; in fact, the Act, since its passage, has been much more freely discussed than it was before. When the Bill was first introduced in the House of Parliament, its general provisions were considered acceptable, and it was thought that it would be kept free from party politics. It was hoped by all parties that Mr. Lloyd George was effecting legislation in the best interest of the working classes and the sick poor. There seems little doubt, however, now, that the passage of the Act has really weakened the Government materially. It is freely stated that the recent Liberal reverses in England were largely due to opposition to the Act. Even moderate men in England are saying unkind things about the Chancellor of the Exchequer.

Sir James Barr, the President of the British Medical Association, has some doubt "about there being as much cohesion in the medical profession as to set this Act at naught; but if Sir Charles Macara and the cotton spinners of Lancashire say they will not have it, then Mr. Lloyd George may retire with his Act to that obscurity from which he never should have emerged. I quite agree with the *Standard* that it is nothing short of a calamity that such a man should hold any office in any Government."

The British Medical Association.

The British Medical Association took a great deal of interest in the proposed Bill while it was being considered by Parliament. Its representatives had many consultations with the Chancellor of the Exchequer. It was hoped for a long time that Mr. George would deal justly with the medical profession. The great difficulty arose as to the settlement of questions pertaining to the relationship between the doctors and the friendly societies.

It was generally considered that there were six cardinal points which should be conceded before the Bill was accepted: 1. The patient should have free choice of his own doctor. 2. The doctor should be free of friendly society control. 3. The wage limit should be £2 for those insured. 4. The medical profession should be adequately represented on the local Medical Committees. 5. That the medical profession should determine the method of payment, and 6, the rate of payment in each district.

The true position of matters respecting the relationship between doctors and friendly societies has never been, and is not now understood. The chief reason for this is that much will depend on the decisions of the local Committees in the different districts. It is not known, for instance what proportion of medical men will be placed on these Committees.

The Present Position of the Profession.

We are told by the *Spectator* that, "early in the game" Mr. Lloyd George saw that it was far more important to conciliate the friendly societies than to make concessions to the doctors. Accordingly, he "put his money on the societies," and merely put

a little chloroform on a handkerchief in the case of the doctors, whispering to them at the same time that it would be all right when they woke up. At the recent great meeting at the Queen's Hall, London, to which we referred in a former issue, it was obvious that the medical profession is seriously alarmed. The *Spectator* thinks they realize that they have been "done," but they do not intend to stay "done."

A quasi referendum has been organized by the *Practitioner*, probably the ablest monthly journal in Great Britain, which sent out a voting paper to the 29,567 practitioners of Great Britain, asking the following question:

Are you satisfied that the arrangement made for the profession with regard to the medical service now embodied in the International Insurance Bill would justify you in giving honest and adequate service to the insured?

Up to December 23rd there were 20,712 replies; 20,149 said no; 352 said yes; and 211 were doubtful. The *Practitioner* asked those dissatisfied with the Act to give the following pledge:

Feeling that the present National Insurance Act is unjust to the medical profession, I hereby pledge my word not to accept any service whatsoever under it. I stipulate, however, that unless at least 23,000 of my profession in Great Britain combine with me in this pledge I am to be freed from it.

The number 23,000 is not taken at haphazard. It is calculated that 8,000 will be required to work the insurance scheme. Therefore, if 23,000 of the medical men of the country agree to stand together in not working it, the Act cannot possibly be put into successful operation.

It seems quite clear now that it is not a matter of politics with the members of the medical profession in Great Britain. It seems to be generally understood that fully half of the doctors now protesting are Liberals. In fact, the great feature of the agitation is the solidarity of the medical profession.

The British Medical Journal.

We find in the *British Medical Journal* of Dec. 23rd a long article on the new Act, advising caution on the part of the doctors of Great Britain. It quotes from the King's speech with reference to the part of the Act which contains provisions for medical, sanitorium, sickness, disablement and maternity benefit: "I anticipate with confidence that the operation of this measure will fortify the existing inducements to thrift and self-reliance, will do much to alleviate misery and to check disease among those whose social conditions it is designed to ameliorate."

The *Journal* says at the present time there are two different currents of opinion with regard to the policy which the profession are to adopt. On the one side we have, apparently, the vast majority of the profession, who think that doctors should refuse to undertake any duties which the Bill proposes to assign to them. The other party, including apparently the Council of the British Medical Association, think that doctors should refuse to accept any office under the Act until the six cardinal principles before mentioned shall have been definitely conceded.

If the doctors refuse to undertake any duties under the Act it would involve the refusal to serve on the National Boards of Insurance Commissioners, on the Advisory Committees, or Medical Health Com-

mittees, and also the refusal to form Local Medical Committees.

There is either a serious misunderstanding between the majority of the profession in Great Britain and the Council of the British Medical Association or a fixed conviction on the part of the majority that the Council of the Association is wrong as to its opinions heretofore expressed.

Club Practice.

It seems to us that this Act, if carried into effect without any amendments, will legalize and perpetuate all the worst features of club practice without, as Sir James Barr says, having any redeeming feature of its own.

It is difficult for us in Canada to understand the position taken by the British Medical Association and the *British Medical Journal* on this important occasion. Why should they approve of anything so objectionable as this form of contract practice? It would seem a very strange procedure indeed if a body of medical men representing the Canadian Medical Association should go to Ottawa to consult with the Honorable Thomas White as to the most convenient methods of forcing over a third of our doctors to engage in about the worst form of club practice that the mind of man has ever conceived.

It is quite true that a number of our doctors in Canada engage in contract practice, but as a rule they retain at least some semblance of independence. They can demand their price, and at any time break a contract which is not found satisfactory. The Government of Great Britain is apparently trying to compel a large proportion of the medical profession

of Great Britain to engage in club practice under very humiliating conditions. The doctor must give up his freedom, accept the price fixed by the Government, and allow the officers of the friendly societies to decide as to when and how often he shall visit his patients. He must become, in short, an absolute slave of a very inconsiderate band of taskmasters.

AMERICAN HOSPITAL ASSOCIATION

The next meeting of the American Hospital Association will be held in Detroit, September 24 to 27, 1912, under the Presidency of Dr. Henry W. Herd, Secretary, Board of Trustees, John Hopkins Hospital. The Association is composed of Hospital Trustees, Managers, Contributors and Officers of the Association, founded to promote the interests of organized medical charities. It aims to promote economy in hospital management, to educate the public regarding hospital needs, give information regarding every phase of hospital work, to assist those who are carrying hospital burdens, and in every way possible to improve the care of the sick. Dr. J. N. E. Brown, of Toronto, is Secretary of the Association.

THE VON PIRQUET REACTION AND ITS SIGNIFICANCE

Ever since the discovery of the tubercle bacillus, we have sought for some quick and easy method for accurate diagnosis of tuberculosis. It seems quite

possible that we shall, before long, discover a test which will be to this disease what the "Widal" is to typhoid, or the "Wassermann" to syphilis.

A few years ago von Pirquet and his assistant, Schick, working in the Children's Hospital in Vienna, found that, after vaccination with old tuberculin, there was, in certain cases, a definite reaction in the neighboring tissues, comparable to the vaccination for smallpox, but usually not so severe. This redness and soreness began in about 24 hours and lasted two or three days. Unsurpassed experience in the post-mortem room showed these two observers that the reaction, in their clinic at least, was a fairly accurate test for the presence of tuberculosis. Their results were not published till they had inoculated nearly 5,000 cases.

The reaction remains to-day exactly what its two discoverers said it was, but it is, unfortunately, very much misunderstood. Schick found that practically every child in his clinic over 4 years of age gave a positive result. He also found at autopsy, that practically every child over 4 years of age gave evidence of tuberculosis, such are the insanitary conditions of Vienna. He, therefore, definitely stated that the reaction was good only up to the age of 4. After that period, it is of little assistance. These two observers sought to manufacture a tuberculin compound which would not be as sensitive as old tuberculin. They used a precipitate obtained with iron, and designated "Eisen-tuberculin," but it has not fulfilled their expectations. One can, however, speak hopefully of the future. There must soon be some substance discovered which will be accurate for adults as well as children.

At the present time, it must be clearly understood,

that in Canadian cities the reaction is of little value after say ten years of age. Its meaning always is that the patient has now, or has had tuberculosis. After early childhood, the chances are that he has already been infected. If these facts are kept clearly before the mind, the von Pirquet reaction becomes of great value when properly interpreted.

F. A. C.

XVIITH INTERNATIONAL MEDICAL CONGRESS

The XVIIth International Congress of Medicine will be held in London from August 6th to August 12th, 1913, inclusive, under the patronage of His Most Gracious Majesty, George V., King and Emperor, and Presidency of Sir Thomas Barlow. Dr. W. P. Herringham, whose visit to this country many will recall with pleasure, is the Honorary General Secretary of the Congress. Through his courtesy we are able to publish in this issue the rules and regulations of the Congress.

Rules of Congress.

Art. 1.—The Seventeenth International Congress of Medicine will be held under the august patronage of His Most Gracious Majesty George V., King and Emperor.

Art. 2.—The Congress will be opened on the 6th August, and will close on the 12th of August, 1913.

At the time of Congress, the Central Bureau will be located in the Royal Albert Hall, Kensington Gore, W., and will be opened for the inscription of members on Tuesday, 5th August, at 10 a.m.

Art. 3.—The object of the Congress is exclusively scientific.

Art. 4.—The members of the Congress will be:

(a) Qualified members of the medical profession, who have made formal application, and have paid the subscription hereinafter fixed.

(b) Scientific men who have been nominated by a National Committee or by the Executive Committee, and have paid the same subscription.

Art. 5.—The subscription is:

£1 sterling; 25 kroner (Austria); 25 francs; 20 marks; 15 rupees; 20 kroner (Norway); 5 dollars (United States or Canada).

The wives and daughters of members of Congress desiring to profit by the advantages accorded to them, must pay half the subscription fee.

Subscriptions should be sent by postal order or cheque payable to:

The Treasurers,

XVIIth International Congress of Medicine,

13 Hinde St., London, W.

and, the Section in which each member wishes to be inscribed must be indicated.

In the case of any country in which there is no system of international postage exchange, the services of a banker must be employed. No one can be enrolled as member of Congress before the receipt of his subscription.

An applicant when sending his subscription should enclose his visiting card indicating his medical qualifications and titles and his full postal address. Any change of address must be immediately notified. Cards of Membership will be sent out from the Central Office of the Congress within eight days following the receipt of the subscription.

Art. 6.—Members of Congress will receive the volume of the Transactions recording the proceedings at the general sessions, as well as the Transactions of the Section in which they have been inscribed.

Art. 7.—The Sections of the Congress are twenty-two in number besides which three sub-sections are established, namely:

I. Anatomy and Embryology; II. Physiology; III. General Pathology and Pathological Anatomy; IIIa. (Sub-

section) Chemical Pathology; IV. Bacteriology and Immunity; V. Therapeutics (Pharmacology, Physiotherapy, Balneology); VI. Medicine; VII. Surgery; VIIa. (Subsection) Orthopædics; VIIb. (Sub-section) Anæsthetics; VIII. Obstetrics and Gynæcology; IX. Ohpthalmology; X. Diseases of Children; XI. Neuropathology; XII. Psychiatry; XIII. Dermatology and Syphilography; XIV. Urology; XV. Rhinology and Laryngology; XVI. Otology; XVII. Stomatology; XVIII. Hygiene and Preventive Medicine; XIX. Forensic Medicine; XX. Naval and Military Medicine; XXI. Tropical Medicine; XXII. Radiology.

Art. 8.—The organization of the Congress is in the hands of the Organizing and Executive Committees.

Art. 9.—There will be two General Meetings of the Congress, the Inaugural Meeting and the Closing Meeting. At these meetings the speakers will be the Government delegates who have been invited by the Organizing Committee or designated as such, and these alone. At the Closing Meeting the President will announce the city in which the next Congress will be held. This will be determined by the Permanent Commission which will sit during the Congress.

Art. 10.—The scientific work of the Congress will consist in: (a) general sessions; (b) sectional sessions; (c) combined sessions of two or more sections.

Art. 11.—The number of general sessions, and the number of speakers will be fixed by the Executive Committee. There will be no debates in the general sessions.

Art. 12.—The sessions of the sections will be occupied in formal discussions on the Reports (*rapports*), also by the reading and discussion of papers on subjects chosen by individual members of Congress. The work of the Sections is dealt with in separate regulations.

Art. 13.—Two or more Sections may hold combined sessions.

Art. 14.—Members of Congress may take part in the proceedings of Sections other than that in which they have been inscribed.

Art. 15.—The speeches delivered at the Opening and Closing General Meetings, as well as the Reports opening formal dis-

cussions will be published in full. As to communications on subjects selected by individual members, only those papers will be published which the authors have personally presented to the Congress, and the Executive Committee, after consultation with the Sectional Committees, has decided to publish.

Art. 16.—The manuscripts of speeches delivered at the General Meetings must be sent to the General Secretary. The manuscripts of remarks made in discussions, and papers read by individual members at the Sectional Sessions must be delivered immediately (see Art. 14 of the Sectional Rules) to the Secretary of the Section concerned.

Art. 17.—The Central Office of the Congress will use the English, French and German languages for international business. In the General Meetings Italian may be used as well as these languages.

Art. 18.—All correspondence should be addressed to the offices of the Congress, as follows:

The Hon. Gen. Secretary,

XVIIth International Congress of Medicine,

13, Hinde Street, London, W.

On the envelopes of letters relative to the scientific work of the Sections, the Section to which they refer should be specified.

Art. 19.—Information concerning the reductions in fares granted by railway companies, hotel and boarding accommodation, excursions, etc., will be published before the 30th April, 1913.

Rules of Sections.

Art. 1.—The Sections will meet at 9.30 a.m and at 3 p.m.

Art. 2.—The first Session of each Section will be opened on Wednesday, 6th of August, at 3 p.m.

Art. 3.—The President of the Section will be responsible for the conduct of the discussions, for the application of the rules, and for the punctual accomplishment of the work of the Secretaries. If the President is prevented from being present at any Session of his Section, his place will be taken by one of the Vice-Presidents or by a member of the Council of the Section.

Art. 4.—There will be no Honorary Presidents of Sections.

Art. 5.—The Sessions will be conducted according to the Parliamentary regulations in general usage.

Art. 6.—The Sessions will include discussions on the reports and the reading and discussion of papers on subjects selected by individual members.

Art. 7.—Reports (*rapports*). In each Section the morning Session will be reserved for the discussion of important questions which have been previously selected by the Council of the Section. Each discussion will be introduced by one or two reporters chosen by the Council of the Section with due regard to the International character of the Congress. The definite programme of the discussions will be published on September 30th, 1912. The manuscripts of the reports must be typewritten, and must be sent to the Central Office of the Congress by February 28th, 1913, at the latest. The reports of each Section will be printed and distributed three months before the opening of the Congress, to all members of the Section who have then been enrolled. (See Rules of Congress, Articles 4 and 5.)

The reports will not be read *in extenso* at the Session. Each reporter will, however, be allowed a maximum of fifteen minutes for an opening *resumé,* and ten minutes for a reply at the end of the discussion. Other speakers taking part in the discussion will be allowed a maximum of ten minutes only for their remarks.

Art. 8.—Members of Congress who desire to take part in the discussion of any report may enter their names before the Congress by giving written notice to the General Secretary. During the Session they must communicate directly with the Secretary of the Section.

Art. 9.—Speakers will be called upon by the President according to the order of their inscription on the Agenda.

Art. 10.—Independent Papers. The afternoon Sessions will be devoted to the reading and discussion of independent papers. The titles of such papers ought to be announced to the Central Office of the Congress by the 30th of April, 1913. The Council of the Section has the right of selection from among the papers offered, and of declining any that they do not consider desirable. The Council of the Section will arrange the order in which the selected papers shall be read. Any papers offered after the 30th April, 1913, will only be placed upon the agenda after the dis-

cussion of those which have been announced before this date and have been chosen by the Council of the Section. No paper will be accepted unless the text has been received by the Secretaries of the Section before the 1st of July, 1913.

A maximum of fifteen minutes will be allowed for the reading of a paper, and five minutes for each speaker who takes part in the discussion. The author of the paper will be allowed five minutes for a reply.

Art. 11.—Speakers will receive two intimations from the President as to their time limit; notice will be given two minutes before, and at the moment of expiry of the period allowed.

Art. 12.—For certain communications of particular importance and general interest, the President may, with the consent of the Section, prolong by five or ten minutes the periods already indicated.

Art. 13.—If a speaker wanders from the subject under discussion, or indulges in personalities, the President may call upon him to sit down. If several members ask to speak upon a paper, and the hour is late, the President may on his own authority, or upon the proposition of a member, defer further discussion upon that paper to the end of the Session, if time permit.

Art. 14.—The text of the remarks made in the course of discussions will only be inserted in the Transactions of the Congress if the speaker sends it in writing, condensed into twenty lines of print, to the Secretary of the Section before the end of the Session. (Block note-sheets will be placed for this purpose at the disposal of members by the Secretaries.)

Those who omit to conform to this regulation will lose the right to have their remarks published in the Transactions.

Art. 15.—The Executive Committee reserves to itself the right to abridge the report of any discussion, and to omit any remarks of a personal character.

Art. 16.—Private resolutions can only be proposed after previous notice given to the President, and when the business on the Agenda has already been disposed of. For the proposal of any special resolution a maximum period of 5 minutes only will be allowed.

The President will authorize only such resolutions as come within the limits of the work of the Section.

Art. 17.—No vote may be taken, nor any resolutions passed, upon questions of science or theory, but only on such questions as possess a practical or administrative character. On such questions the sense of the meeting will be taken by the majority standing or remaining seated.

The President will transmit such resolutions as shall be passed, through the General Secretary, to the Permanent Commission of the Congress. The Commission will decide whether the resolutions in question ought, or ought not, to be put to the vote at the Closing Meeting of the Congress.

Art. 18.—The Secretaries of each Section will send an account of its transactions for the daily journal. This account will mention in chronological order the subjects of the reports and discussions, the papers read, the names of the speakers, and any resolutions submitted to the Section.

Personals

Dr. Geo. McDonagh, of Toronto, left for a trip to the Barbados Jan. 10, and expected to be away about three months.

Dr. John Caven is still in Louisiana near New Orleans, and according to last reports his health is much improved.

Dr. Oswald Dinnick, formerly of Toronto, is now living in London, Eng.

At the annual meeting of the South Ontario and West Durham Medical Society the following officers were elected: Hon. Pres., Dr. J. T. Fotheringham, Toronto; Pres., Dr. D. Farncomb, Newcastle; Vice-Pres., Dr. W. Beith, Bowmanville; Sec.-Treas., Dr. J. F. Finigan, Oshawa; Executive Committee, Dr. R. Bett, Oshawa; Dr. Proctor, Whitby, and Dr. McCullough, Orono.

Dr. W. H. Harvey, formerly of Toronto, and latterly of Cambridge, has received one of the Beit Memorial Fellowships for Medical Research.

Dr. Walter S. Verrall, who has been resident surgeon at the Toronto Orthopædic Hospital, has left to take up practice in Phoenix, B.C.

Dr. W. B. Hopkins, "Jumbo," of Hamilton, was elected as Alderman again in Ward 6. There were five in the field, all being ex-Alderman, with only two re-elected.

Book Reviews.

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles, on Treatment, Medicine, Surgery, Neurology, Pædiatrics, Obstetrics, Gynæcology, Orthopædics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and other topics of interest to students and practitioners. By leading members of the medical profession throughout the world. Edited by HENRY W. CATTELL, A.M., M.D., Philadelphia, U.S.A. With the collaboration of William Osler, M.D., Oxford; John M. Musser, M.D., Philadelphia; A. McPhedran, Toronto; Frank Billings, M.D., Chicago; Chas. H. Mayo, M.D., Rochester; Thos. H. Rotch, M.D., Boston; John G. Clark, M.D., Philadelphia; James J. Walsh, M.D., New York; J. W. Ballantyne, M.D., Edinburgh; John Harold, M.D., London; Richard Kretz, M.D., Vienna. With regular correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels and Karlsbad. Volume IV. Twenty-first Series, 1911. Philadelphia and London: J. B. Lippincott Company. 1911.

As usual International Clinics contains a splendid collection of articles dealing with all branches of medicine. Apart from the more technical papers presented we note in this volume an article by Sir Dyce Duckworth, entitled "Empiricism in Modern Medicine," which we are sure will be found of interest. Dr. Thomas F. Reilley concludes his article on "The Successful Practice of Medicine." This should be read with great profit, particularly by the younger members of the profession, dealing as it does with a subject about which ordinarily one hears nothing.

As a medico-literary quarterly International Clinics is in the first rank, and the reading of it cannot help but be profitable.

A Handbook of Practical Treatment. By many writers. Edited by JOHN H. MUSSER, M.D., LL.D., Professor of Clinical Medicine in the University of Pennsylvania, Philadelphia, and A. O. J. KELLY, A.M., M.D., Assistant Professor of Medicine in the University of Pennsylvania, Philadelphia. Volume II. Philadelphia and London: W. B. Saunders Company. 1911.

The second volume of this system of treatment has been eagerly looked for, and quite comes up to, if not surpasses, the expectations aroused by a study of the first volume.

Volume II. deals with diseases of the cardio-vascular system, infectious diseases and diseases due to animal parasites.

Sir Clifford Allbutt contributes a most extensive article on the treatment of disease of the cardio-vascular system, written in his own unsurpassed literary style. Mr. Dent, Surgeon to St. George's Hospital, London, contributes a short but most interesting section on the surgery of the heart. The infectious diseases are taken up in great detail, and something which is quite new are the sections on ocular, oral and joint complications of the infectious diseases. The treatment of tuberculosis is discussed in a most complete manner by Dr. Otis, of Boston. This article is splendidly illustrated, and takes up the treatment of the white plague as it is met with in all conditions of society, from the poorest to the richest.

Canadian readers will be particularly interested in the articles contributed by Dr. Lewellys Barker of Johns Hopkins Hospital.

But where there is so much good it is hard to discriminate. The articles contained in this volume all indicate a searching investigation of the literature and methods on the part of the writers, and will serve as a standard on treatment for many years to come.

To those who are looking for a work on treatment, which is eminently practical and yet written in a true scientific spirit we can most heartily recommend Musser and Kelly's System.

Health Readings. By C. J. Thomas, M.B., B.Sc. (Lond.). London: Methuen & Co.

Dr. Thomas, one of the staff of Medical Inspectors of Schools in London, England, has written an excellent elementary text-book on general health for the use of school children. The interest of the subject is developed naturally as well as scientifically, and the rules of health relating to food, clothing, housing, etc., are placed before the child with a due regard to his own viewpoint. Information indeed, in the chapter on "Homes of Beasts and of Men," is of such a genuine and fresh character that anyone, child or grown-up, would read it with a sense of pleasure.

A Treatise on Diagnostic Methods of Examination. By Professor Dr. Hermann Sahli, Director of the Medical Clinic, University of Bern. Edited, with additions, by Nathaniel Bowditch Potter, M.D., Assistant Professor of Clinical Medicine at Columbia University (College of Physicians and Surgeons), New York; Visiting Physician to the New York City Hospital, to the French Hospital, and to the Hospital for Ruptured and Crippled. Second Edition, revised. Authorized translation from the fifth revised and enlarged German edition. Philadelphia and London: W. B. Saunders Company. 1911.

Salhi's Diagnosis has long been the recognized standard on this continent, as well as in Europe. The present English translation from the Fifth German Edition leaves nothing to be desired as a text-book on diagnostic methods. The physics of the conditions met with in examination of the lungs and heart are fully and clearly presented, thus furnishing for the student an application of his knowledge of physiology to the examination of the body.

The Chemical Sections have all been rewritten up to date in regard to the latest reactions and techniques. The book is splendidly illustrated with cuts and plates, and reflects great credit on the author, translator and publishers.

Selections.

The Etiology of Arteriosclerosis

The knowledge of etiology of such a disease as arteriosclerosis is of more importance from the standpoint of prevention than of cure. Chronic degenerative changes in the walls of the arteries, when manifested by symptoms, are usually of a degree in which *restitutio ad integrum* can no longer be thought of, and the physician's task must be confined to symptomatic treatment and to the adaptation of the patient's mode of life to the limited function of the circulatory system. It was with the idea of preventive medicine that Max Herz, a well-known heart specialist of Vienna, sent out several hundred inquiries among Austrian physicians in the endeavor to learn the causes of arteriosclerosis, as understood by them. The letters were sent to the men who presumably were situated to study the causes of this condition, namely, the family physicians, who know more of the habits and mode of life of their patients than the specialists in large cities. The results of this method of investigation, reported in the *Wiener klinische Wochenschrift,* proved to be quite interesting, some 800 answers having been received by Herz. Of the causes named as productive of arteriosclerosis, without reference to the frequency of such causes, nervous and psychic influences were mentioned in some 748 instances, age in 455, alcohol in 451, syphilis in 406, diseases of metabolism in 397, physical labor in 354, tobacco in 339, heredity in 267, food and drink in general in 103, infectious diseases in 104, tea and coffee in 61, and temperature changes in 53. The surprising thing in this table, according to Herz, is the number of answers mentioning nervous and psychic influences in the etiology of arteriosclerosis, for he says that specialists in the diseases of the heart and blood-vessels would not have given a similarly important place to these causes. Yet the opinions of the physicians addressed by Herz were in accord with the popular opinion of "premature age," that is, of arteriosclerosis, and moreover, were quite rational when the great importance of the psychic factor in bodily functions is remembered. The frequency of the other causes mentioned is much as can be expected from such an inquiry, the rôle of alcohol, tobacco, gout, syphilis, etc., in the etiology of arteriosclerosis having been unmistakably shown by clinical observations everywhere.

Herz's figures assume a somewhat different aspect when they are studied from the standpoint of importance of each cause of arteriosclerosis mentioned, and not from the number of physicians naming it. Of course, the relative position in the scale of frequency gives this aspect of the etiology of arteriosclerosis, and the answers could be easily grouped into three divisions. Of them, psychic and nervous influences were mentioned first in 150 instances, physical work in 146, age in 138, alcohol in 133; in the second group, tobacco received 88 votes, syphilis 77, heredity 72; in the third group, food and drink in excess in 24 instances, metabolic diseases in 19, coffee and tea in 13, infectious diseases in 4, changes of temperature in 3 instances. Several causes received but scattering mention and cannot be discussed here.

This arrangement of answers is of still further interest, for it shows the great divergence of opinion among practical physicians regarding the importance of the various factors in the etiology of arteriosclerosis. It shows, too, that the active campaign against alcohol and against tobacco, with the usual statements about their importance in the causation of the degeneration of the arteries, has not led Austrian physicians to change their views on the subject. Indeed, many of them specifically remarked upon the rarity of arteriosclerosis in regions where men, women, and children were in the habit of using alcoholic beverages, or where the peasants never let their pipes out of their mouths. On the other hand, such a local arteriosclerotic condition as "intermittent claudication" was in every instance referred to the excessive use of tobacco.

We cannot here further consider Herz's interesting study of the etiology of arteriosclerosis, but it certainly should call forth similar inquiries in other countries, so that the causation of this widespread affection of modern life can be better understood. The pendulum has had its maximum swing in the direction of the study of infectious diseases, and it is time that diseases of metabolism and chronic degenerations, such as arteriosclerosis, recovered their proper place in medical research.—*Medical Record.*

The Administration of Chloroform in the Upright Position

The opinion has long been held, not only by general medical practitioners but also by professional anæsthetists, that it is not altogether a safe procedure to administer chloroform with the patient sitting upright. That this view would appear to be the

correct one seems to have gained a certain amount of support from the fact that fatalities have several times been reported as occurring after such administration, usually in dental cases. In a paper recently read before the Harveian Society by Mr. John H. Chaldecott, which we publish in another column, a plea is made for a reconsideration of the whole matter, and if the arguments contained therein are carefully followed, we think that most will agree that the author has succeeded in establishing his points. At any rate, he has had no fatalities, nor has he witnessed the occurrence of any dangerous symptom in a series of 1,400 administrations. As to the relative safety of the upright as compared with the recumbent position, Dr. Chaldecott has no hesitation in preferring it for nose and throat operations, while it is certainly more convenient for the surgeon. One rather remarkable feature of the cases, which has not yet been explained, is that vomiting rarely occurs, or is only slight, and the general after-effects are much less when this method is adopted. It is essential in this, as in other modes of administering anæsthetics, that the anæsthetist should thoroughly understand the technique and that he should be prepared to act as an assistant if required. There appear to be no contra-indications to the upright posture, nor is there any special type of patient for whom the method is unsuitable.—*Medical Press and Circular.*

The Leucocyte Count During Sleep

G. Fulpius (*Sem méd.*) draws attention to some interesting facts in this connection. Hitherto the influences of food, fasting, exercise, and certain medicaments have been recognized as affecting the leucocyte count. The author points out the sleep must be added as another physiological factor, which produces a marked variation of the leucocyte equilibrium. Impressed by the discordant reading of the blood in tuberculous cases, very comparable clinically, the author has come to the conclusion that the time at which the blood count is made is responsible for this. If the blood of an individual asleep or just awake is examined, it is found that the lymphocytes, which are normally 25 per cent., rise to 40 per cent. or more, while the polynuclears diminish in proportion as do the eosinophiles and basophiles. Two or three hours latter, when the patient has begun to move about, the normal ratio is established. The actual total of leucocytes per c.mm. undergoes only slight variation, as do the red cells and

percentage of hæmoglobin. The author quotes, among other cases, that of a tuberculous patient whose blood, examined during sleep, gave a total of 18,500 leucocytes per c.mm. Of these, 74 per cent. were polymorphonuclears and 16 per cent. were lymphocytes. The result of an examination later in the day showed a total of 17,500, of which 80 per cent. were polymorphs and 7 per cent. lymphocytes. Indeed, a tuberculous person examined during the day may present a lymphopenia, whereas during sleep and rest there may be a normal average of lymphocytes. The author suggests that the slowing of the circulation during sleep may suffice to explain the condition as an unequal distribution of the elements of the blood—the heavier elements accumulating in the heart and great vessels, while the lighter elements circulate in the peripheral vessels. He is not, however, satisfied with such an explanation. The results obtained, however, go to show that, contrary to the usual opinion, the leucocyte equilibrium is not constant physiologically apart from the effect of food, exercise, and other influences.—*Brit. Med. Jour.*

Pulmonary Emphysema

Robin, in his "*Therapeutique usuelle du praticien,*" advises that the respiratory passages be kept in an aseptic condition. He uses the following:

Bismuth. subnitratis .....
Acidi borici .....aa grn. lxxv.
Camphor .....℥iiss
Cocainæ hydrochloridi .....grn. ½
Mentholis .....grn. ¾
Mix thoroughly.
Sig.: For a snuff.

Before using the foregoing, the passages may be washed with a 3 per cent. solution of borax. The same solution, flavored with mentholated alcohol, may be used for the mouth and throat, or a good liquid dentifrice will serve.

As to internal treatment by drugs, Robin prescribes:

Sodii arsenatis .....grn. ¾
Potassii iodidi. .....grn. lxxv.
Aquæ dest. .....℥x

M. Sig.: Large tablespoonful ten minutes before meals. Continue for ten days, then intermit.

For the ten days of intermission, order:

Strychninæ sulphatis .....grn. ss
Aquæ dest. .....℥x
M. Sig.: Dessertspoonful twice a day.

Robin points out that all treatment of pulmonary emphysema is more or less palliative, as the condition is essentially chronic. Strict hygienic precautions are demanded, change of air, care in diet, etc.—*N. Y. Med. Jour.*

Enlarged Tonsils and Crime

The latest theory, which hails from Washington, is that enlarged tonisls are a frequent cause of juvenile crime. The opinion of so distinguished a criminologist as Judge DeLacy upon this subject is stated to be backed up by many leading members of the medical profession in Washington, one of whom, Dr. C. R. Dufour, of Georgetown University Hospital, is said to have examined a large number of mentally backward and incorrigible children and to have discovered in them the existence of enlarged tonsils and adenoids. Some of these were taken and the morbid growths were removed, after which considerable improvement began to show itself in their character and conduct. Any source of reflex irritation present in a child of neurotic or ill-balanced temperament cannot but react unfavorably upon its mental life, so that its removal might be expected to have a good influence in preventing the development of undesirable traits.—*Medical Press.*

Osteomyelitis and Epithelioma

Epithelioma is known to have an inflammatory precancerous stage in very many of its clinical forms, but few surgeons would connect it *a priori* with a chronic osteomyelitis, and few physicians would anticipate that cancer may be a sequel—even remote—of an acute infectious disease. A pathologist, of course, would at first sight deny that an epithelioma could possibly develop from bone marrow. It has been known for many years that typhoid fever has as a not infrequent sequence a bone lesion known as periostitis, osteoperiostitis, osteomyelitis, etc., according to the structure of the bone attacked. In more recent years it has been learned that the paratyphoid bacillus, the germ of

influenza, etc., can set up the same lesion, and it is highly probable that the gonococcus, *Bacillus coli*, pneumococcus, in fact, any pyogenic germ, can cause these bone lesions in the course of a bacillemia, however mild or latent the course. Moreover, we now know that such lesions may not appear until very many years after the original infection. Thus in one instance a patient evidently had a paratyphoid infection years before the germ of that disease was described. It was diagnosticated at the time as typhoid fever. The exact nature of the disease was revealed after twenty years when a suppurating bone lesion developed, the pus of which was rich in paratyphoid-A bacilli. These lesions are naturally managed by curetting or resection, and a sinus is left to heal up from the bottom. While we do not know the exact mechanism involved, it is evident that epidermal tissues are now and then transported into the bone cavity, in which locality they may undergo cancerous proliferation after properly healing in. At a recent meeting of the Breslau Surgical Society Hadda reports such a case (*Berliner klinische Wochenschrift*). He is careful to distinguish it from epithelioma beginning in the epidermis of a bone sinus, which is by no means rare. In the cases under consideration, Hadda says, there is evidently a direct grafting of the epidermal tissues into the bone substance.—*Medical Record.*

Benign Nature of Uterine Fibroids

It becomes more and more evident, as studies are more thoroughly made of the symptomatology and pathology of uterine fibroids, that these neoplasms are anything but benign. They do not recur after removal or extend by metastatic processes, but they produce a morbidity and mortality which makes them worthy of serious consideration.

As early as 1863, Virchow demonstrated that primary sarcomatous changes can take place in a myomatous growth; and later, Fehling, in 409 myomata, found two per cent. to show malignancy. Martin observed sarcomatous transformation four times in a series of 205 cases; while in Cullen's series of 1,400, seventeen showed undoubted sarcomata of the uterus occurring in or associated with myomata. In addition to malignant degeneration, these growths are very liable to undergo other degenerative changes, namely, cystic, necrotic, suppurative, or myxomatous, and many others which endanger life and increase

the operative risk, if surgery is postponed. Schmorl asserts that uterine fibromata are the favorite metastatic site of malignant tumors, and indicates the breast, stomach, ovary, cervix, and peritoneum as the primary sites of these growths.

The fallacy of waiting for the menopause and the atrophic changes of that period in fibroids has been exposed; as the climacteric is often delayed for years and the degenerative processes are noted during the fourth decade. An increase in size of the tumor, or a recurrence of hæmorrhage after the menopause should always arouse suspicion of malignancy or degeneration.

The occurrence of pregnancy in a uterus which is the site of a fibroid tumor always arouses apprehension, as these neoplasms, no matter where situated, may seriously complicate pregnancy, parturition, and the puerperium. When we compare the statistics of the operations of myomectomy and hysterectomy for the removal of these tumors by present-day methods, with the statistics justified by the investigations of Noble, that death results in thirty-three per cent. and chronic invalidism in twenty-eight per cent. of all cases not operated in, we can arrive at but one conclusion, and that is, that a symptom producing fibroid tumor of the uterus should be removed as soon as diagnosis is made, unless some marked contraindication to surgical intervention exists.—*N. Y. Med. Jour.*

The Treatment of Tetanus with Subcutaneous Injections of Carbolic Acid

Professor G. Bacelli (*Berliner klin. Wochensch.*) professes to be more and more satisfied with this method of treatment, which has also given good results in other hands. In 190 cases treated by Italian and other physicians the total mortality, according to Imperiali, was 17.36 per cent. Among 94 severe cases there were only two deaths, and among 38 of marked severity, excluding 11 in which the dose of carbolic acid was much too small, there were five deaths. To obtain satisfactory results Bacelli considers it necessary to resort to sufficiently large doses. The amount of carbolic acid injected often exceeded 0.1 to 0.15 gm. He ordinarily made use of a 2 to 3 per cent. watery solution, beginning with daily doses corresponding to 0.3 to 0.5 gm. of the acid in order to test the tolerance of the patient, and then rapidly increasing to 1.0 to 1.5 gm. in several injections during the twenty-four hours. Massive doses, however, are only to be employed with great care and in very serious cases.—*International Journal of Surgery.*

Paralysis of Right Third Nerve Following Ethmoidal Operation

A. J. M. Wright (*Journal of Laryngology,* October, 1911.): A man, aged thirty-six, with a history of nasal polypi for eight years, had an intra-nasal right ethmoidal operation done for his relief. As a result he developed an orbital hematoma and complete right third nerve paralysis. Six weeks later the pupil was smaller and wasting, the ptosis had lessened, but the condition otherwise was unaltered.

Toxicity of Acetanilide

The fact that caffeine is a circulatory stimulant naturally led to the supposition that its presence in a prescription containing acetanilide or other antipyretic afforded an antidote in some measure to the toxic effects of the latter. Influenced by this idea, we have permitted our patients to take doses of these antipyretics, when so "sheltered," of a size they would fear to administer, if given alone.

Worth Hale's experiments in animals show that the addition of caffeine to acetanilide caused death by the latter more quickly or in smaller dose, while sodium bicarbonate lessened the toxicity. He found acetanilide and sodium bicarbonate the least poisonous, acetanilide alone next, acetanilide, caffeine, and sodium bicarbonate still more, and acetanilide and caffeine most. —*N. Y. Med. Jour.*

Miscellaneous

Important New Preparations of Parke, Davis & Co.

General practitioners will be interested in the announcement by Parke, Davis & Co. of two new products of their chemical laboratories. Proposote and Stearosan are the names chosen to designate the preparations in question.

Proposote is creosote in combination with phenyl-propionic acid. It is a straw-colored, oily liquid, neutral in reaction, nearly odorless, and having a slightly bitter taste suggestive of creosote. It is insoluble in water but is slowly decomposed by alkaline liquids. The indications for it are the same as those for creosote. Tubercular cough following pneumonia, the cough of pulmonary tuberculosis, acute and chornic bronchitis, purulent bronchitis, abscess of the lung, asthma and bronchitis complicated with Bright's disease are among the pathological conditions benefited by its administration. Being insoluble in acid media, it passes through the stomach unaltered by the gastric juice, to be slowly broken up by the alkaline fluids of the small intestine, hence may be given in gradually increasing doses until the desired effect is obtained. During prolonged administration, as is well known, creosote disturbs digestion, impairs the appetite, and often causes nausea and vomiting. Proposotè is free from this objection.

Stearosan is santalol combined with stearic acid. It is an odorless, tasteless, light-yellow oily liquid that is insoluble in water and dilute acids, but is slowly broken up by alkaline fluids. The pathological conditions in which it may be employed with advantage are precisely those in which santal oil has long been used—chronic gonorrhœa, cystitis, urethritis, vaginitis, pulmonary disorders, such as chronic bronchitis, bronchorrhea, etc. It possesses therapeutic properties fully equal to those of santal oil, over which it has the important advantage of being practically without irritating effect upon the stomach. The explanation of the latter fact is that the preparation is not attacked by the acid gastric juice, but passes into the small intestine, where it is broken up or emulsified by the alkaline fluid and absorbed without difficulty. The distressing eructations and loss of appetite attendant upon the administration of santal oil do not occur when Stearosan is given.

Both Proposote and Stearosan were thoroughly tested clinically before being offered to the medical profession, and prac-

titioners may be assured of their therapeutic efficacy in all cases in which they are indicated. They are supplied in 10 minim elastic gelatin capsules, boxes of 12, 24 and 100, and may be obtained through retail druggists generally.

The Mysteries of Physiological Chemistry

Amand Routh, in his presidential address before the obstetrical and gynæcological section of the Royal Society of Medicine, October 5th (summarized in the *Lancet*, October 14th), remarked that physiological chemistry was an extremely difficult subject. Taking into consideration only its obstetrical aspects, we are completely in the dark regarding the chemical constitution of the toxines that produce hyperemesis gravidarum, albuminuria, eclampsia, the diabetes of pregnancy apart from ordinary glycosuria, the chorea of pregnancy, acute yellow atrophy of the liver, and puerperal insanity. Are these toxines, asked Routh, produced from the ovarian or placental metabolism? Why does amputation of the breasts or injection into them of potassium iodide cure eclampsia? Serum obtained from a pregnant woman differs from that obtained from other women; why? In view of the problems presented by Doctor Routh and recalling the extraordinary difficulty with which students vanquish ordinary chemistry, we seem to be hardly on the threshold of the mysteries of physiology.—*Med. Mag.*

Researching the Researchers

Lately we have heard not a little in the public press about muck-raking the muck-rakers. In a recent number of the *Journal A. M. A.* a well-known neurologist in a puerile criticism of psychoanalysis uttered as his crowning idea the statement that the thing to do to expose the so-called fallacies of psychoanalysis would be to psychoanalyze the psychonanalists. The way to cure infectious diseases seems to be to introduce some of the products of the same infection. From allopathy we seem to have jumped clear over homœpathy straight into the arms of isopathy. No longer do we believe that the hair of the tail of the dog will cure the bite. Now the up-to-the-moment course of procedure is apparently to inject some of the supersublimated quintessence of dog. No longer can we resist this universal tendency toward auto-

inoculative criticism. Why not conduct a research into the value of research? Research the researchers.

Most of us hold our breath and bow low when we find ourselves in the sacred presence of the research or laboratory man. He comes from a mysterious realm of complicated apparatus, obscure chemical formulas and the deepest problems. We do ont know what very much of the labored results of his research, so safely and fortunately hidden away in the most technical of publications, is all about, but we assume that it is of very great value to the world. After all, are not the men on the outside of the laboratories the men who are "doing things," and not just "counting things," somewhat hypnotized by the glitter of glassware and the wealth of recorded detail, apparently so essential to any properly conducted research?

Vast sums of money are yearly donated to the cause of research. Yet, after all, what do the researchers find out for us? Obscure men, working alone and financially largely unaided, often contribute to science most remarkable discoveries. But often they no sooner do this than they are endowed by some man of wealth with a laboratory and annual income, and then we hear no more about them. They have ceased to be scientists and have become researchers. They then spend much of their time putting their names to papers they never wrote (giving the men who did write them minor mention in the preface), proposing problems to be worked out by their assistants, securing special write-ups in the popular magazines and attending banquets and making after-dinner speeches.

It cannot be denied that a great deal of work done in the name of research is futile. Much of what is called research is nothing more than mere counting and measuring. It almost always errs on the side of concerning itself too deeply with one special aspect of a problem. Many of its results are of quite a negative character. Something that no one ever believed was so is discovered quite consistently never to have been so, not so, and impossible ever to be so. Other conclusions, while positive in character, are highly trivial in value.

Much of what is called research is something like this: The question, is the American type evolving toward the Teutonic or the Latin, occurs to Professor A. Having attached himself to some heavily endowed institution, and hence under no necessity of doing any useful work, he decides to find out. He prepares color scales for hair and eyes, standards for skulls, noses and jaws, and then begins to count, compare and measure. Finally he decides that it is or is not, and calls his result a contribution

to science. Men who can devote themselves to such problems themselves constitute a special type, a narrow and intellectual involuted type. They seldom really get anywhere; because, while they may be highly familiar with the intimate details of their own special field, they lack the philosophic breadth necessary to turn an apparently trivial fact into a valuable and vital fact by bringing it into proper co-ordination with the broader field of science and human life.

It is our firm conviction that the advance of science is rather hindered than helped by the magnificent endowments that have within recent years been made for the advancement of research. They offer too great an encouragement to the mediocre type of man, the mere detail man and routinist and pensioner, who, having secured his bed and board and pay, feels that he must do something to earn them—but it doesn't matter just what. At the same time the outsider (often from whom the great discoveries have come) is discouraged from all attempts at original work, because he feels that where others so much better equipped accomplish so little, he can only accomplish less.—*The Lancet-Clinic.*

What is Best in Tonics?

Many people, and perhaps a few physicians, are inclined to consider the terms "tonic" and "stimulant" as more or less synonymous and interchangeable. This, of course, is not the case, although some agents employed medicinally may partake of the properties of both and be properly known as "tono-stimulants." Strychnia, for instance, is a heart stimulant, but may also be considered as a general nerve and systemic tonic when given in small and frequently repeated doses. While a stimulant alone is sometimes indicated in conditions of emergency, its long continuance almost certainly produces an after depression. It is sometimes advisable, however, to give stimulant and tonic together in conditions of serious general depression, the first to "boost" the vitality and the second to hold it at the point to which it has been raised and to restore the general tone of the organism. An ideal combination of this nature is Pepto-Mangan (Gude) to which has been added the proper dose of strychnia, according to indications. This combination is especially serviceable in the convalescence of exhausting diseases such as typhoid fever, pneumonia, la grippe, etc. It is also of much value when the heart needs support and the general system re-

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quires upbuilding. Pepto-Mangan restores vitality to the blood by increasing the number of red cells and the percentage of hemoglobin, and the strychnia assists in rendering the combination a peculiarly efficient general bracer and permanent reconstituent.

The Canadian Medical Exchange, for the purchase and sale of medical practices, 75 Yonge Street, corner of King, conducted by Dr. W. E. Hamill, Medical Broker, advises us that no time during the past 15 years has he had such a choice list of practices and openings to present to prospective purchasers as at the present time, and he feels assured that any physician desiring a practice can secure a short cut thereto by making his wants known to him, when full information free will be furnished. Full particulars, both to vendors and vendees, will be given upon application.

The Greatest Living Philanthropist is a doctor—Dr. D. K. Pearsons, who resides at Hinsdale, near Chicago, he having practically completed the distribution of his entire furtune, amounting to about $7,000,000 Needless to say, Dr. Pearsons did not accumulate this fortune in the practice of medicine, which he abandoned many years ago. He has given his money mainly to small colleges, and now that it is all gone, he has presented even his elegant home to the little suburban town in which he lives, to be used as a library and museums while he is spending the last few years of his life—he is now ninety-one—in a local sanitarium.—*Medical Fortnightly.*

Anesthesia with Warmed Ether and Chloroform Vapors

Dr. A. Lawen (*Münch. med. Wochensch.*) from experiments made in Trendelenburg's clinic, believes that this method may serve to diminish at least a small number of post-operative complications, even though it may not contribute materially to the prevention of pneumonias. He regards it particularly indicated in protracted abdominal operations and in cases in which large wounds result, as after breast extirpations. Another indication is in exsanguinated patients or those suffering from severe shock. Under these circumstances warmed anæsthetic vapors, in connection with the inhalation of warmed air, contribute to the other measures applicable in such cases.—*International Journal of Surgery.*

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Stab Wounds of the Heart with Recovery

Dr. F. Hesse (*Archiv f. klin. Chir.*) reports 10 cases of injuries of the heart treated by operation, with 6 recoveries. In three of the cured cases, the pleura and pericardium were drained primarily, the former by means of resection of the ribs on the left side below the scapula. Examinations after recovery showed shrinkage of the left side of the chest and a displacement of the cardiac boundaries to the right, normal heart sounds and pulse.—*International Journal of Surgery.*

Sterilization of the Skin

Dr. A. Don (*Archiv. f. klin. Chir.*) adds another to the already numerous methods of preparing the patient's skin for operation. His favorite preparation consists of 15 parts of crystalline sodium sulphite, 40 parts of calcium monoxid prepared from pure marble dust, and 45 parts of pulverized cold water starch. This is preserved in bottles containing 100.0 gm. each. It is claimed to be a depilatory and cleansing agent, to destroy all bacteria in the skin, to act very rapidly, and to be easy of application. It can also be employed in combination with other methods of disinfection.—*International Journal of Surgery.*

Treatment of Infected Wounds

Dr. F. Ruska, cited in *Wiener klin. Wochensch.*, No. 42, 1911, points out that in the modern treatment of wounds more importance is nowadays assigned to aiding the resistance forces of the organism in the battle against bacteria than to the disinfection of infected wounds. In his opinion this purpose is best served by glycerine dressings, which relieve congestion by absorbing secretions and thereby promote the circulation of tissue fluids in the affected parts. In this way they also keep the wound clean and soften and loosen crusts and necrotic portions of tissue. All this tends to remove the chief factors which favor the growth of micro-organisms, while the absorption of toxins from the wound surface is also diminished. Glycerine itself possesses slight antiseptic power, which can be reinforced by the addition of antiseptics. Moreover, there is no risk in its use, as it can be given in very large doses, 190.0 gm. internally, without any unpleasant by-effects. Apart from the slight burning at the time of applica-

The Medical Press and Experiments with

BOVRIL

The report on the nutritive value of Bovril read before the annual meeting of the British Medical Association is attracting wide attention in the medical profession.

The "British Medical Journal" of September 16 devoted some six pages to a detailed account of the recent experiments, in which it was shown that **in the case of human beings the body-building power of Bovril was "even more marked"** than had been previously shown in the experiments with animals.

A further article has just appeared in the "Medical Times," and that journal points out that the experiments were originally conducted "with the object of ascertaining whether a certain beef extract (Bovril) supplied to the Government had any nutritive value or not. The results were simply startling."

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tion, the dressing is painless, does not adhere to the wound, and therefore can be easily removed. The technic is very simple: A compress moistened with glycerine is directly placed upon the affected part and covered with some impermeable material, and the dressing changed twice daily. Wounds infected with the ordinary pus organisms run a very favorable course, inflammatory phenomena and discharge subsiding in a remarkably short time. The surface rapidly becomes clean and healthy granulations appear. The more acute the symptoms the better the effect of the treatment. Abscess formation in inflammatory infiltrations is frequently avoided. Ruska's experience is based upon about 100 cases, comprising infected wounds, phlegmons, panaritia, adenitis, and in none of them were any unpleasant by-effects noted even where the glycerine dressings were applied to extensive areas for several months.—*International Journal of Surgery.*

Bromural

Bromural has been found of very good service as a nervine and hypnotic by Josephsohn in many cases of nervous irritability and depression. He prescribed it in headache, giddiness, sleeplessness, buzzing in the ears, palpitation, disturbances of vision, gastric pressure, etc., when these symptoms accompanied hysteria, arteriosclerosis, chlorosis and myocarditis. In some cases the cause of the symptoms could not be ascertained. In all cases the result was quickly obtained and there were never any troublesome secondary appearances, such as bromide rash.

O. Schäfer obtained such excellent results in neurasthenia, angina pectoris and in cardiac and vascular neuroses that he prescribed bromural in all diseases which were causing insomnia either by reason of the pain accompanying the disease or by setting up a condition of irritation. In fractures and traumatic shock it was also found of good service. In sexual anomalies it produced a general sedative effect, and also tended to prevent gonorrhœal erections.

In sea sickness, Heinicke observed that the vomiting and the giddiness left off very quickly after the administration of bromural. Even when the sea was rough the patients felt quite well, provided the bromural treatment was assisted by the usual precautionary measures. At first a dose of 0.3 gramme (5 grains) was usually given, and if necessary a second dose of 0.15 gramme (2⅓ grains) half an hour later. The largest dose given by the author was 0.45 gramme (7 grains).

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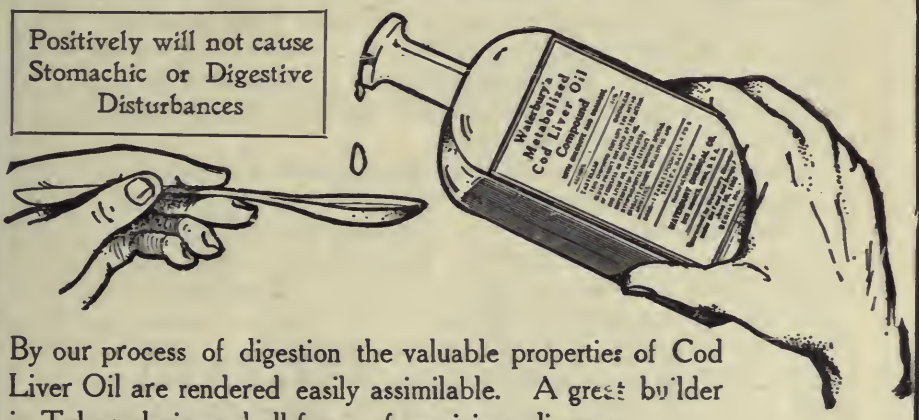

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Bromural is useful as a sedative in dental practice. G. J. Dietrich gave it to nervous patients half an hour before treatment to drive away their restlessness and fear. In most cases he was successful. In anæsthesia with ethyl bromide or ethyl chloride, the preparation, when given beforehand, causes the anæsthesia to run a quiet course, and it is said to be a useful remedy after an anæsthetic to prevent nausea and headache. As a hypnotic bromural was found valuable in cases in which patients were unable to sleep after long courses of Plombières baths or as the result of painful wounds. Finally the author recommends bromural for the relief of pain if the application of arsenic has proved insufficient when the pulp is to be exposed.—*Merck's Report.*

Positive Wassermann Reaction in Non-specific Tumors of the Central Nervous System

Recently several reports have appeared in the medical literature announcing positive Wassermann reactions in non-specific affections of the central nervous system, especially in tumors of the brain and cord. Our present knowledge of the nature of the substances which interact in complement-deviation would seem to enable us, however, to find satisfactory explanations for these occurrences; hence the pathognomonic significance of the Wassermann reaction may not have to be questioned:

1. Extracts prepared from syphilitic livers may contain bacterial antigens as well as syphilitic, and the presence of the corresponding bacterial antibodies in the patient's serum may produce a positive reaction not due to syphilis. This factor is a source of error which applies not only to tumors of the central nervous system, but also and especially to neoplasms of the various organs and to tuberculosis, affections in which secondary infection plays so important a part.

2. The inhibition of hemolysis in non-specific affections is, almost always, incomplete. In many such cases a larger amount of amboceptor, three to five times the simple hemolyzing dose, will produce complete hemolysis, whereas the specific, control serum will not be influenced by this increase of hemolysin.

3. Whereas in general an alcoholic extract is permissible, in diseases of the central nervous system a specific watery extract is essential. There is no doubt that, besides the specific antigen-antibody mixture, a high amount of lipoids (cholesterin, lecithin, sahidin) contained in antigen and in serum may suffice to absorb the total quantity of complement. This fact explains the be-

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Report of Public Health Laboratories, London Hospital, Medical College, London, Eng.:

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havior of some icteric and chylous serums, which alone without the addition of antigen fix the complement and can therefore not be used for the Wassermann reaction with the usual technic. Since lipoids are insoluble in water but soluble in alcohol, the alcoholic extract differs vitally from the watery in its high content of lipoids, whereas the specific antigenetic substances are not readily soluble in alcohol. The lecithin content in the serum and cerebrospinal fluid of syphilitic, tabetic and paralytic patients is usually increased, which explains why in all affections of this nature a positive result is so frequently obtained.

If now we consider the important rôle which the phosphatids play in the composition of nervous substances, it may be possible that also in other affections of the central nervous system, as disseminated sclerosis or tumor, an impoverishment of lipoids is brought about, in all the organs, especially in bone-marrow, which secondarily may lead to a lipoid accumulation in the blood-serum. By the summation of the lipoids contained, on the one hand in the antigen, and on the other in the serum, the complement may become absorbed. This error may be excluded by the use of a watery extract, for whereas the lipoid content in the serum alone will be insufficient to hinder hemolysis, which of course will be manifested by controlling the serum without addition of antigen, the addition of lipoids contained in the alcoholic extract may be sufficient to cause a complete inhibition of hemolysis.

Only after considering all these possibilities of error, and excluding them by the use of a technic answering these indications, are we justified in refuting the specificity of Wassermann's reaction.—*J. A. M. A.*

Exploratory Puncture of Pleura

The records of about 20,000 consecutive admissions to the medical wards of the New York Hospital, Dayton (*Surgery, Gynæcology and Obstetrics*) found included one case of breaking of the needle in the chest-wall, three of subcutaneous emphysema, one of puncture of an abscess of the lung followed by septic symptoms, four of hemoptysis, one of puncture of an aortic aneurysm, one of syncope and one of death after sudden onset of grave cerebral symptoms. The precautions in performing exploratory puncture of the pleura, which analysis of these twenty-three cases of accidents due to pleural reflexes suggests, are: (1) Avoid moving a patient with pneumonia or pleurisy with effu-

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sion, especially from the recumbent to the sitting posture. (2) Avoid turning him on to the sound side. (3) Avoid excitement before the operation. (4) Use as small a needle as will suffice and avoid all unnecessary shock as this is badly borne by pneumonia patients. (5) Never use the exploring needle as a labor-saving device if a careful study of physical signs will suffice. (6) Puncture cases with probable consolidation only when a definite indication for diagnosis or treatment exists, e.g., the probable presence of pus as shown by the temperature curve and increasing polymorphonuclear leukocytosis, or extreme and increasing signs of fluid indicated by displacement of the apex-beat or by respiratory embarrassment. In a case beginning as a definite lobar pneumonia it is often more conservative to wait until after the crisis before exploring, unless the symptoms suggest the necessity for early operation if pus should be found. In such a case rapid resolution may remove the signs which simulate fluid. If the signs are such, however, as to prevent a clear diagnosis of the intrathoracic lesion, and empyema is suspected, explore without delay, especially in children. Dayton believes that more lives are probably lost by delayed diagnosis of empyema than by all the accidents due to exploratory puncture of the pleura.—*J. A. M. A.*

Intravenous General Anaesthesia

A. M. Dodge (*Boston Med. and Surg. Jour.*) states that the originator of this method, Burkhardt, usually employs three solutions: (a) physiological salt solution; (b) physiological salt solution containing 5 per cent. ether; and (c) physiological salt solution containing 1½ per cent. isopral. Although in some cases the isopral solution was not used, the routine was to start the anæsthesia with it and continue with the ether solution. These solutions are contained in large burettes, all connected by rubber tubing to a glass cannula, which is introduced into the vein in much the same manner as for the intravenous use of salvarsan. Any superficial vein may be used, but as a rule the median basilic of the left arm will be found the most convenient. Anæsthesia is induced somewhat more rapidly than by inhalation, and after it is complete the plain salt solution is alternated with that containing the ether according to the depth of anæsthesia required. As a rule, less than half the amount of ether used by inhalation is necessary, and the patients recover with the customary unpleasant after-effects of ether absent or much mitigated. Intravenous anæsthesia is indicated in operations about the head and

"while the paramount serviceability of a remedy is its therapeutic value, its adaptability is an item of no small import.

This is particularly true in the application of hot moist heat, the generally accepted treatment for inflammatory conditions, where its continued application is so essential for results.

To subject a patient to frequent and unnecessary dressings and exposure, as is the case where poultices, moist packs, etc., are used, not only retards the progress of treatment, but disturbs and annoys the patient and is not in keeping with advanced therapeutics.

The serviceability of antiphlogistine as a therapeutic agent is best attested by the preference accorded it by the medical profession in the treatment of Congested or Inflammatory conditions where hot moist heat is called for.

The adaptability of antiphlogistine indicates it as the best medium for the employment of hot moist heat, as it is easy to apply, holds its heat for hours and thus does not disturb or annoy the patient."

neck, in hæmorrhage, in weak cachectic patients, in diseases of the respiratory tract where inhalation anæsthesia is objectionable, etc. It is contraindicated in nephritis, extreme arteriosclerosis, severe heart lesions, plethoric patients, etc. In the author's opinion, its chief field of usefulness will be found in operations about the head and neck, in which it is desirable to have the anæsthetic and anæsthetist removed from the surgical field, and here it would seem to be the method indicated in a majority of cases.—*Medical Record.*

Salvarsan in Scorbutus

Since much of the picture of buccal scurvy is due to the activation of the mouth spirochetes, Tuschinsky and Iwaschenzow have tested the action of salvarsan, which has already been shown to destroy these parasites in various kinds of stomatitis. The bad state of nutrition in these patients is due largely to the condition of the gums. Repeated small doses of the drug caused a notable reduction in the number of spirochetes with corresponding improvement.—*Medical Record.*

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Original Communications

THE RELATION OF ACCESSORY SINUS DISEASE TO GENERAL MEDICINE*

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Diseases of the accessory sinuses are, if not modern in existence, at least modern in treatment. It is little more than a quarter of a century since Ziem of Dantzig, by a series of articles upon antrum diseases, opened up this fertile field for investigation. Morell MacKenzie did not mention them in his work published in 1882, and Hyrtl is quoted by Lack as stating in the same year that the sphenoidal sinus was quite outside the field of surgical interference. It was in 1885 that the first operation upon the sphenoidal sinus in the living patient was performed by Schäffer.

The study of accessory sinus suppuration is, therefore, in its length and breadth a matter of our day and generation, and its relation to general medicine may well detain our attention for a few minutes this evening.

Before proceeding to discuss the subject proper a brief renewal of our knowledge of the anatomical relationships of the accessory sinuses to the neighboring portions of the skull will be in order, and for this purpose I will make use of a few slides and diagrams, without entering into a minute description.

The nerve and arterial supply are of interest, but need not detain us; on the other hand, the venous and lymphatic drainage are of the utmost importance as giving clues to the possible direction of absorption processes.

*Read before the Medical Association of Hamilton.

The veins returning the blood from the rich venous plexuses and the cavernous tissue within the nasal mucous membranes follow three chief paths, passing (a) forward to the facial vein, (b) backward to the spheno-palatine, and (c) upward to the ethmoidal veins.

The facial vein empties into the jugular, but also communicates with the cavernous sinus through the ophthalmic vein, and also through the deep facial vein which empties into the pterygoid plexus, and so through the foramen ovale.

Much of the superficial blood of the upper part and side of the face passes inward to the brain case (Piersol).

The spheno-palatine communicates with the sphenoidal veins and opens into the pterygoid plexus and the internal maxillary.

The ethmoidal veins issue into the orbit and come in close relation with the optic nerve, communicating with the ophthalmic vein and the veins and superior longitudinal sinus within the dura mater. A communication of *greater* importance is that established by a vein that accompanies the anterior ethmoidal artery through the cribriform plate into the anterior central fossa, and empties either into the venous plexus of the olfactory tract, or into one of the large veins upon the orbital surface of the frontal lobes (Zuckerkandl). Communication exists with the interior of the skull in children through the foramen cæcum also (Watson Williams).

The lymphatics within the mucous membrane are represented by an irregular plexus of lymph vessels, in addition to the perineural sheaths surrounding the olfactory nerve bundles. These can both be filled by injection from the subarachnoid space. These lymphatics pass backwards towards the posterior nares and join two trunks, one of which is continued to the prevertebral, and the other to the hyoid nodes in the retro-pharynx. Some of the lymph vessels, however, communicate with the superficial nasal lymphatics and proceed chiefly in company with the facial blood-vessels and reach the submaxillary nodes.

When we turn to development and peculiarities of formation we find that in ten per cent. of the maxillary sinuses there is an accessory ostium below the uncinate process of the ethmoid, behind the common ostium, uncovered by the middle turbinal, and pus discharged through this will most readily pass backward into the naso-pharynx (Watson Williams).

The antrum is small at birth, and does not alter in size till second dentition, attaining its full limits only in adult life.

The relationship of the anterior and posterior dental nerves explains the direct and reflex pains in antral sinusitis, while tumors may bulge the bony walls outwards, upwards and forwards.

We must not forget that this sinus is not completed by the superior maxillary bone, but that the lachrymal, ethmoid, inferior turbinal and palate bones all assist in the formation of its boundaries.

There are two varieties of frontal sinus, the small and the large; the former does not rise above the line drawn between the two supra-orbital notches, while the large may measure two inches vertically, extend outwards into the malar bone, backwards even into the lesser wing of the sphenoid, and also into the crista galli and the root of the nasal bone (Watson Williams). The septum separating them may be partial or absent, or both cavities may open by separate passages into one side of the nose.

Development is begun after birth, and at 8 years it extends ¼ inch above the root of the nasal bones.

Much of late has been written upon the position and shape of the ethmoidal cells, by Onodi, Shambaugh, Mosher, etc. It is needful to remember that large anterior cells may occupy the space usually assigned to the frontal sinus, and if present these cells interfere with the fronto-nasal duct. Other cells may invade the middle turbinal body, and similarly posterior cells may be pushed outward above the eye and below the cranium, or over the top of the sphenoidal sinus.

Deficiencies in the os planum frequently occur, and predispose to orbital cellulitis and emphysema.

As the frontal, lachrymal and sphenoid bones each take part in closing in the edges of the ethmoid box, they are unavoidably concerned in any pathological process affecting the ethmoid cells.

The sphenoidal sinuses may vary from entire absence to a cavity occupying the whole of the body of the sphenoid as far back as the foramen magnum.

Their relationships are interesting. The roof from before backwards is in relationship with the olfactory nerves lying in slight depressions, the frontal lobes, the optic nerves, ophthalmic artery, optic chiasma and the sella turcica. On either side the walls show an eminence corresponding to the carotid or cavernous groove, in which lie the internal carotid artery and the cavernous sinus.

The sinuses may open into the posterior ethmoidal cells instead of the superior meatus.

The relationship of the internal branch of the nasal or spheno-palatine artery and nerve with its anterior wall explains the reflex infra-orbital neuralgia associated with sphenoidal sinusitis (Watson Williams).

Deficiencies of the walls of this sinus are also common, and this predisposes to involvement of the optic nerve.

Suppuration.—In introducing his chapter upon diseases of the accessory sinuses, St. Clair Thompson says: "The study of acute and chronic inflammation of these cavities deserves careful consideration for the following reasons:

"1. It may reveal the true source of many cases of nasal and post nasal catarrh.

"2. Distant and sometimes obscure symptoms may be traced to sinus suppuration.

"3. The symptoms are frequently not characteristic.

"4. There is often some associated affection in the nasal chambers.

"5. Several sinuses may be affected simultaneously.

"6. Evidence of sinus suppuration or of its localization in some cases can only be arrived at indirectly.

"7. The affection tends in certain cases, as yet not well determined, to fatal sequelæ.

"8. The detection and cure of the condition is sometimes an easy proceeding and well within the province of any practitioner."

Diseases of the sinuses other than suppurative have no practical bearing on this paper, nor need we concern ourselves with the causes of the presence of pus in one or other of the cavities in question, but must rather ask ourselves, Provided pus be present, what are its possibilities of extension? That pus is present far more frequently than is generally thought is very evident when we turn to the results of post mortem investigation. Harke found it in 134 out of 400 examinations, viz., 35.5%, and Frankel in 40%. Other observers practically corroborate these figures.

Clinically, the percentage is much lower, but Chiari and Lichtwitz found sinus suppuration present in 2% of the patients attending their clinic, which Lack considers a fairly average proportion. That it is not more frequently observed is because of its difficulty of detection; many cases give absolutely no history and others dismiss it under the general expression, "have suf-

fered for years from nasal catarrh." Th discharge comes away sufficiently freely to prevent retention symptoms and is swallowed with the secretion from the naso-pharynx, and perhaps the most dangerous cases of all are those which are most difficult of detection.

It requires all the varied resources and skill of the *trained specialist* to detect and locate the pus cavity. Certain salient evidences of nasal trouble may be mentioned, however, attention to which will lead to a more frequent consultation with the specialist and, therefore, an earlier relief of your patient's symptoms.

Nasal Obstruction.—The normal method of breathing is solely through the nose, and the slightest variation from this normal should attract the prompt attention of any practitioner careful of the interest of the families he may attend. A misplaced septum, a septal spur, a swollen middle turbinal, a polypus, general œdema of the turbinal tissues, and retained secretions, may each interfere with sinus drainage and set up a suppurative process.

Nasal obstruction is capable of producing very serious interference with the general physique, mentally and corporeally, if occurring in the young (Lake).

Nasal Discharges.—Nasal catarrh is not a normal condition in any individual, and has *a cause*. The most innocent-looking discharge may really contain pus. Many patients are habitually unobservant and deny the presence of nasal symptoms which examination shows to be present. Sometimes the discharge is so slight that patients have swallowed it for years unconsciously. Some individuals have never known what it is to enjoy perfect bodily comfort, and, having always suffered from catarrhal or muco-purulent inflammations of the nasal passages, give no history whatever, but on pressing them we find that with every fresh cold they suffer from headache, neuralgia, lassitude, poor digestion, etc., which subside with the re-establishment of a free nasal discharge. Hajek and Lack believe most cases of accessory sinus disease are due to the spread of catarrh from the nose.

The nose is filled with bacteria, pus from the sinuses has been found to contain the bacilli of influenza and diphtheria, the diplococcus of pneumonia, Friedlander's pneumonia bacillus, the streptococcus, the staphylococcus, albus and aureus, diplococcus lanceolatus, the bacillus pyocyaneus and bacillus coli, Hoffmann's pseudo-diphtheria bacillus and Weichselbaum's meningococcus.

The nose cannot kill off the bacilli which lodge in its secretions, and these secretions have no inhibitory power whatever.

The discharges from the nose pass back into the pharynx and thence to the stomach, and so, therefore, do these bacilli. On its way, however, it may be blown into a neighboring sinus (vomited matter has been found in the sinuses), or the eustachian tube, or inhaled into the bronchi. What vast possibilities are presented, for pus in the stomach produces gastric catarrh, which robs the patient of his power to digest food properly, besides dosing him with toxines and ptomaines which profoundly poison his nervous system (Holmes).

Headache is the third most common feature. It is usually periodic, and may be located in any part of the head, but the location is no index of the particular sinus which may be affected. The amount of headache is in inverse ratio to the freedom of drainage. Persistent headache which cannot definitely be explained should always lead to investigation of the accessory sinuses.

Pus coming from any one of the sinuses may produce symptoms in *neighboring* or *distant regions,* or may *affect the general health.*

The Nose.—As the discharge proceeds backward into the naso-pharynx a chronic naso-pharyngitis or recurring attacks of tonsillitis are among its most familiar results.

The Eye.—As might be expected from its intimate anatomical relationship and the direction of the venous and lymphatic drainage, the eye has proved most vulnerable. Direct extension will explain the infection of the nasal duct, and the conjunctivitis resulting, as also the periostitis, orbital abscess and orbital cellulitis, but the most interesting observation made of late years shows that a large proportion of all cases of optic neuritis are due to suppuration of the ethmoid and sphenoidal sinuses. Reflexly ptosis may be associated with frontal sinus disease. Squint, by pressure of an orbital abscess, and phlyctenular keratitis, diminution of the field of vision, photophobia, blepharo-spasm, etc., have been observed. Such remote results as iritis, glaucoma and cataract have also been definitely connected with suppuration in the sinuses.

The ear may be affected in two ways: A purulent otitis media may be set up, as stated above, by the nasal secretion being thrown violently through the tube into the middle ear, by sneezing, etc., but the bulk of the ear symptoms are those produced by irritation of the tube, as in naso-pharyngitis, including tubal catarrh, vertigo, tinnitus, deafness, etc.

The Face.—Pains were taken above to trace the nasal drainage by the facial venous and lymphatic system because absorptive inflammations of the face, such as erysipelas, are frequently due to bacterial infection from the nose.

The Cranial Fossa.—If a patient be persistently the victim of neuralgia or headache, exploration of the sinuses is always in order.

A most interesting series of cases of sinus suppuration producing mental symptoms have been recorded by Stucky.

Here again the anatomical relation suggests the possibility of direct infection, either by extension of the inflammatory process or through the venous and lymphatic connection (and let me here remind you of what was said above).

That severe mental depression involving inability for continued application, inferior quality of work, over-anxiety, procrastination, etc., are often associated with sinus suppuration is well established, but mental conditions verging upon, if not merging into, insanity have been relieved immediately by the discovery and treatment of a diseased sinus. The feeling of depression is due to the interference with the exit of the small amount of blood and lymph which finds its way from the anterior part of the cranium through the facial vein, together with the pressure of an inflammation so adjacent to the frontal lobes (Lake).

That a variety of elements may enter into the causal relations of mental symptoms and sinus suppuration is evident when we consider the possibilities of direct extension through a vein or lymph channel—toxæmic absorption, pressure conditions, meningeal irritation, and reflex nervous conditions.

Cases of brain abscess secondary to ethmoiditis and frontal sinusitis are reported with increasing frequency, not because of more frequent occurrence, but because of more perfect diagnosis. Here there may be: (1) infection of the diploe; (2) infection through the venous or (3) lymph channels, without any palpable trace of the route followed; (4) caries and destruction of the sinus wall so as to allow of the pus coming into direct contact with the meninges, or (5) by mischief spreading along the ophthalmic vein to the cavernous sinus.

Thus pus in the ethmoidal labyrinth is most prone to set up meningitis, while in the frontal sinus it may be followed by abscess of the frontal lobe, and sphenoidal sinusitis is more frequently the source of thrombosis of the cavernous sinus, or basal meningitis (Thompson).

That I do not over-emphasize the importance of the cranial relation is evident when I quote the opinion of Holmes, "that after excluding cerebro-spinal and tubercular meningitis and trauma and a small proportion of cases that may have had their origin from the head and neck outside of the naso-pharynx and sinuses, practically all cases of inflammation of the brain and its membranes are caused by extension of purulent inflammation from the ear, and from the nose and its accessory sinuses."

2. The larynx and respiratory tract, the stomach and digestive tract, are more remotely involved.

Unexplained cough, varieties of laryngitis, and recurrent attacks of broncho-pneumonia simulating pulmonary tuberculosis, have in various instances been found to be symptomatic of the absorption of nasal pus (Thompson).

Darling, pathologist to the Ancona Hospital, Panama, recently conducted an investigation into the relations of the accessory nasal sinuses to pneumococcus infection. He found that 92% of all pneumococcus infection—including lobar pneumonia, meningitis, septicæmia and pericarditis—coming to autopsy showed in a very marked degree more or less typical pneumococcus inflammation of one or more of the nasal accessory sinuses. The inflammation was generally intense, pneumococci were always present, and in number dependent upon the duration of the process, while the age of the sinus infection was appreciably greater than that of the lung—and he concluded that *the portal entry of the pneumococcus is in most instances an accessory nasal sinus.*

I have above referred to the evil effects of continued reception of pus upon the stomach functions, and most victims of sinus disease sooner or later develop marked signs of general derangement of the digestion and nervous mechanism.

The constant absorption of pus by the intestinal tract is almost as serious in its consequences as if absorbed directly at its point of formation.

General septic infections occurring after operation, especially abdominal operation, are often traceable to a septic sinus cavity.

The successful management of a case of indigestion in many instances depends solely upon the detection of a previously undiscovered nasal focus of pus formation. So great is the sapræmia induced, with its attendant wasting and general ill-health, that phthisis has not infrequently been wrongly diagnosed.

3. The effect upon the general health has been foreshadowed

in the foregoing sentence, viz., loss of weight, prostration, fever, anæmia, mental depression, hebetude. Many cases of nasal catarrh, if carefully recorded, will show a daily variation in the temperature of from 1 to 2 degrees. General acute septic absorption is rare, but may follow operative interference.

Investigations are being engaged in even now which may prove that inflammation of the gall bladder, appendicitis and rheumatoid arthritis owe their origin in many instances to absorption from a pus secreting sinus.

From my private case records I have collected the histories of some forty cases of accessory sinus suppuration, and have made notes of the complaints as stated by the patients, and of the sinus found to be involved. These will suffice to prove the frequency with which the three features of nasal obstruction, nasal discharge, and headache, which I emphasized above, were met. The more remote symptoms have only been recorded in a few instances, but I believe that this is due to a failure upon my own part to make the search (and the preparation of this paper will at least have the effect of stimulating my own observation.)

Case 1.—Headache, followed by swelling over eyes. Frontal.

Case 2.—Pain in right cheek, discharge from nose with odor for one year. Frontal.

Case 3.—Foul discharge from right nostril for two years, appeared suddenly. Occasional pain over eye, and in top and back of head, with a return of asthmatic symptoms present nine years earlier. No polypi. Frontal.

Case 4.—Recurrent colds, with pain over right eye, several times a year. Frontal.

Case 5.—Pain and swelling of eyes with temple headache following grippe. Frontal.

Case 6.—Pain and swelling in right cheek, discharge from right nostril. Frontal and maxillary.

Case 7.—Pain over right eye, discharge from right nostril. Frontal.

Case 8.—Repeated removals of polypi. Headache and nasal discharge. Frontal, ethmoid, and maxillary.

Case 9.—Pain in left forehead for two weeks following a cold. Left-sided nasal obstruction with post-nasal discharge. Ethmoid.

Case 10.—Pain shooting into right ear and throat, eye and side of nose, beginning in upper teeth. Discharge from right nostril. Maxillary.

Case 11.—Neuralgia in side of head for four years. Frontal.

Case 12.—Deafness and fullness of ears for two years, nasal obstruction and discharge. Ethmoid.

Case 13.—Severe attacks of asthma. Removal of polypi at intervals. Ethmoid.

Case 14.—Continuous colds in the head. Frontal and occipital headaches. Frontal and maxillary.

Case 15.—Blurring of vision, flakes and flashes before eyes. Headache and nasal discharge. Ethmoid.

Case 16.—Nasal obstruction, and discharge with odor. Removal of polypi. Ethmoid and maxillary.

Case 17.—Nasal obstruction. Tinnitus. Vomiting, headache. Ethmoid.

Case 18.—Catarrh of left nose and throat. Ethmoid.

Case 19.—Catarrh, chiefly in throat. Ears blocked. Indigestion. Ethmoid.

Case 20.—Headaches, lasting 24 hours. Relief accompanied by discharge. If this be pus, head remains clear for six weeks; if not, pain continues off and on. Ethmoid.

Case 21.—Diffuse nasal discharge. Headache and loss of sense of smell. General health bad. Ethmoid.

Case 22.—Profuse nasal and post-nasal discharge, with frequent exacerbations. Deafness, and repeated colds in the head. Ethmoid.

Case 23.—Cold in head, sore teeth, swelling under eye, with tenderness above. Discharge from nose with odor. Ethmoid and maxillary.

Case 24. Nasal polypi, removed some thirty times. Post-nasal discharge. Ethmoid.

Case 25.—Nasal obstruction and discharge for six years. Dacryocystitis. Maxillary and sphenoid.

Case 26.—Bilateral nasal obstruction, with profuse discharge from nose. Repeated removals of polypi during past six years. Ethmoid and sphenoid.

Case 27.—Mouth breathing, sneezing, frequent colds, and dry throat. Sphenoid and maxillary.

Case 28.—Alternating nasal obstruction. Dry throat and perpetual colds. Post-nasal dropping. Ears full. Indigestion. Sphenoid.

Case 29.—Headache, with some difficulty in seeing. Nasal obstruction, with pain over the root of nose, going up over orbit. Frontal.

Case 30.—Post-nasal dropping and frequent colds. Maxillary.

Case 31.—Alternating nasal obstruction. More or less discharge. Frequent colds. Ethmoid.

Case 32.—Pain over right eye following cold in head. Purulent discharge from nose. Frontal.

Case 33.—Headaches, with pain over eyes, behind eyes and in vertex. Nasal and post-nasal discharge. Frontal.

Case 34.—Repeated colds, with alternating obstruction. Four months since swelling of right cheek and lip. Maxillary.

Case 35.—Fullness of right ear. Dull ache in cheek. Maxillary.

Case 36.—Continuous cold in head for six weeks. Maxillary.

Case 37.—Intermittent pain in right face, radiating into eye and ear, for past year. Eye inflamed and cheek swollen, with nasal obstruction, but no discharge. Maxillary.

Case 38.—Patient came on account of deafness; could elicit no nasal symptoms except post-nasal dropping. Transillumination showed a dark left cheek, and stinking pus was washed from the antrum. Maxillary.

Case 39.—Right nasal obstruction. Pain in right nose. Earache. Maxillary.

Case 40.—Frequent colds. Nasal obstruction. Abundant muco-watery secretion. Maxillary.

Case 41.—Dull pain in cheek, some nasal obstruction, and post-nasal dropping.

Case 42.—Discharge from right nose. Friends complain of odor. Loss of sense of smell. Occipital headache. Frontal and maxillary.

Case 43.—Terrific frontal and occipital headaches for over fifteen years. Only relief from injections of morphia. Discharge indefinite, and chiefly post-nasal. Ethmoid and maxillary.

The last case is one of the most interesting I have met, and worthy a further reference at length: G. T., manufacturer, aged 29, suffers from terrible headaches in both frontal regions, and also below the occiput into the cords of the neck. These are intermittent, formerly occurred every 4 to 6 weeks, but of late two or three times in the week. Attacks will start in the morning, and perhaps be relieved by sleep, if it can be secured. There is a thick yellow nasal discharge, which is increasing, but he has never connected this discharge in any way with the headache. The nose is not obstructed unless during a cold in the head. Some post-nasal dropping. For some years has received injections of morphia from his physician when the pain became unbearable. Physically has been pronounced sound by an emi-

nent consultant, and the optical defect is slight. Examination showed a nose that was remarkably clear of obstruction and free from discharge. The right middle turbinal was rather close to the septum, and somewhat coated with secretion. Transillumination showed right antrum and frontal sinus darker than the left. On washing, a teaspoonful of odorless thick pus was obtained from the right antrum, but none from the left or from the frontal. When seen two weeks later the patient stated that he had been much relieved for three days after the first visit, and that later he had a burst of blood and matter from his nose. The middle meatus was more catarrhal than before, but no pus could be obtained in washing the antrum. The patient was sent for an X-ray. A week later, the patient stated that as long as the free nasal discharge continued the head was relieved. The plate gave no indication of sinus disease and the antrum on being washed was still free from pus, but the middle meatus was again catarrhal. I decided to open up the right ethmoid region, and proceeded at once to remove the entire right middle turbinal, and some of the most internal ethmoidal cells posteriorly. At next visit, a week later, the patient declared himself much better, and a further amount of curetting of the ethmoid was done, but no pocket of pus was discovered. This last removal was followed by entire and continued absence of all headache, to the great joy of my patient. The sphenoidal sinus was entered with the probe, but no pus found.

RADIUM IN THE TREATMENT OF SARCOMATA

By Dr. W. H. B. Aikins,
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and

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A patient referred by Dr. Fader, of Dickinson's Landing, Ont., presented himself on March 21st, 1911, with the following history. He was 33 years of age, a Canadian by birth, married, with two children, and by occupation a station agent. There was nothing of importance in the family history. His previous health had been excellent. In the latter part of November, 1910, he had noticed a mass as large as a small egg in the right axilla. It gave him no pain, but gradually increased in size until it was removed in the Montreal General Hospital on March 4th, 1911. The pathologist's report was that it was a round-celled sarcoma containing sarcoma cells in the lumina of the blood vessels. Naturally a grave prognosis was given, and the patient was made aware of his condition. When he returned home, somewhat despondent, Dr. Fader suggested to him that radium applications might be of service, as cases where good results had been obtained were reported in the literature.

Accordingly, commencing on March 21st, a heavy and extensive radiation was given in the right axilla over the scar. Here it should be stated that when first examined there was a good deal of thickening about the scar. The placques used were so screened that the irritating non-penetrating rays were in a large measure cut off, leaving the hard Beta and Gamma rays to act on the deep tissues. A month later he was seen again. In spite of the screening there had been a good deal of cutaneous irritation, and the skin was somewhat tender. The thickening about the scar, and deeper in, had disappeared, and the tissues in the axilla seemed quite free and moveable. Further radiation was given, and repeated in May, June and July. On each occasion the tissues seemed more nearly normal, and there was no sign of a recurrence.

On September 23rd, 1912, the patient came to the city and reported that he had noticed three days before a small lump in the left axilla. The right side was quite free. The lump was

painless, freely moveable, and as large as a horse chestnut. Surgical removal was advised, and a surgical opinion obtained, but he was very anxious to avoid another operation, if possible, and wanted to see what radium would do to it. He was given a very heavy exposure and told to watch the growth carefully, and report in two weeks. He did this and returned in October. The mass was appreciably smaller and we decided to try further radiation. In November he returned again. The size of the tumor was the same, and we thought the best course was to have it excised. This was done by Dr. Edmund E. King on Nov. 20th.

The tumor mass was submitted to Prof. J. J. Mackenzie, who reported as follows:

"The tissue consists of a small portion of normal lymph gland with a distinctly fibrous capsule and trabeculæ along with a large tumor portion, which is evidently sarcomatous. The sarcoma consists of very large cells, chiefly of the spindle celled type, mixed with occasional cells almost circular in outline. The sarcoma cells tend to be arranged in fasciculi. Between these fasciculi is a connective tissue stroma which in many places is very œdematous, and which shows deep pigmentation due to the deposit of masses of hæmosoderin.

"The nuclei of the sarcoma cells are very large and measure on an average 16 u. in length by 6 u. in breadth, but occasional giant nuclei, measuring 30 u. in diameter, can be seen. These nuclei, however, vary very much in size. Here and there degenerating tumor cells can be seen with deep eosin staining protoplasm and pyknotic nuclei. These are not numerous. Most of the nuclei stain well, but show marked vacuolization. Mitotic figures are fairly numerous in various parts of the section.

"The exact effect of the radium upon the tissue is difficult to estimate, but it would look as if some degeneration of the tumor cells had resulted, and there seems no doubt that the œdematous connective tissue with the marked blood pigmentation indicates degenerative change and subsequent regeneration."

Following the operation the left axilla was radiated, and when last seen (February, 1912) there was no evidence of recurrence in either axilla.

The case is of interest, as it gave us an opportunity to see the histological changes induced by radium on sarcomata, and there follow closely those recorded by other observers.

Wickham and Degrais* report the results of radium treatment in several cases of sarcomata. In a particularly severe case, that of an enormous and metatypical tumor of the thoracic wall, the histological appearances are dealt with in considerable detail.

*Radium thérapie par Louis Wickham et Paul Degrais, deuxième édition, Paris, 1912.

In this case an ulcerative tumor was present upon the right medio-thoracic wall. It consisted of luxuriant vegetations, which surrounded a kind of crater. It was red in color, soft, bled at the slightest touch, and infiltrated the pectoral muscles as far as the hollow of the axilla. Repeated operations had been performed for recurrences of the tumor.

A small portion removed before the commencement of treatment showed the growth consisted chiefly of elongated cells, with abundant protoplasm, and oblong and clear nuclei. At other points the larger cells were circular in shape, and sometimes gave the impression of plasmodia with multiple and distant nuclei. Mitotic figures were fairly common and sometimes atypical, and the vessels deep in the sarcomatous parenchyma were without endo or perithelium. Collagenous secretion was absent, the chromoplasm of each cell forming with that of its neighbors a dense plexus, the meshes of which contained scanty primary hyaloplasm. From the histological appearances they concluded that they were dealing with a polymorpho-celled sarcoma, with a predominance of medium-sized spindle cells.

After application of an apparatus for two nights another portion was removed. Histologically this showed rarefaction of the cells of the tumor, which was separated by a finely granular substance, assumed to be debris of destroyed cells. The remaining cells showed hypertrophy of the body of the nucleus; they had become rounded and irregularly polygonal in shape, and plasmodia with multiple nuclei were more numerous, while there were many mitoses, still chiefly atypical. The interior and anterior portions of the engorged vessels abounded in polynuclear cells. At this early period diapedesis was seen to be indicated, and was a prelude to future phagocytosis.

Ten days later a further portion was removed, the growth now being firm on section, instead of friable, as it had been previously, hæmorrhage was insignificant. At a depth of about a centimetre was granulation tissue in process of sclerosis, containing here and there neoplastic cells of colossal proportions, sometimes 80 to 90 u. They varied considerably in shape, and had an acidophile chromoplasm. The nuclei were well developed, with enormous nucleoli, thickened chromatic filaments, and they were very polymorphous and varied in number. In the majority of these cells polynuclear neutrophile leucocytes were present, but not a single karyokinetic figure. The vessels were diminished in number, and sometimes fissured.

It thus appears that after a brief period of latency radiation results in nutritive and proliferative hyperactivity, manifested

by enormous hypertrophy and increase of mitoses. With the further progress of the destructive process the cells assume a siderated appearance and die. They are then invaded and absorbed by the phagocytes, which in this case are apparently chiefly the polynuclear leucocytes.

The results of a small dose seem to be rather evolutionary than destructive. The morphological and functional characteristics of the cell are modified, and it tends to approximate to the normal fibroblast of the connective tissue.

It is thought probable that in the majority of cases cicatrization is effected by the stroma of the tumor. According to Dominici certain sarcomata are not—correctly speaking—destroyed by radiation, but transformed by a process of evolution into benign fibrous tumors, and these into cicatricial tissue.

This transformation into hard fibrous tissue was well shown in a patient referred by Dr. Wardlaw, of Galt, about eighteen months ago. There was a small round-celled sarcoma involving the tissues in the parotid region and below and behind the ear, which had recurred after surgical removal. With long-continued, powerful radiation the tumor has become firm and hard. It gives every impression of having been transformed into a connective tissue mass.

The changes may be summarized as follows:

1. The primary reaction by nutritive and sometimes also proliferative hyperactivity indicates that with a small dose the rays are hyperbiotic, and not abiotic.

2. Elective cellular necrosis succeeds hypertrophy.

3. When necrosis becomes marked the connective tissue cells multiply, are rejuvenated, and become motile, and there is also leucocytic diapedesis. It must be borne in mind in this connection that the secondary intervention of the vasculo-connective stroma in destruction of malignant tumors is not only a result of the trophic phenomena in the surrounding connective tissue, which is entailed by all cellular destruction; it is not a simple reaction to a trifling inflammation, but the connective tissue itself is influenced and stimulated by radiation.

The above changes were the result of elective radiation, that is to say, without macroscopical necrosis, and the facts brought forward indicate, in their opinion, that the changes are of a curative nature.

The results of radium treatment are necrosis and destruction of the sarcomatous cells, but histological examination has invariably shown parallelism between the amount of energy employed and the number of cells destroyed. Insufficient energy

may lead to multiplication of the cell (radio-excitation), or may put it into a condition of lethargy. Such cells, provided they are not stifled by the neighboring connective tissue, at a given moment pass from diminished vitality to manifested vitality, the result of this being recurrence, and this is an argument for powerful and long-continued radiation.

As to whether malignant tumors are an elective ground for radium, Wickham and Degrais have preparations of a sarcoma of the breast with large spindle cells, the superficial limits of which were at the cutis. The growth was removed after a series of very intense radiations. Microscopically the skin, epidermis and chorion of the cutis showed slight changes, whilst the tumor cells, especially those nearest the source of radioactivity, already presented marked signs of degeneration. It appears that the elective action of the radium upon the neoplastic tissues is much more dependent upon a difference of resistance than upon a special affinity of the tissues and the radiations. The tumoral parenchyma, which has proliferated prematurely and irregularly, is badly fitted to resist the shock of the emanations of radium, and the deficiently nourished and inadaptable cells succumb quickly under conditions in which the normal types from which they are derived would resist. Further, the more the cytological type of the tumor is removed from the normal adult type, the less resistant is it, and thus amongst sarcomata the atypical type is less resistant than fibro-blastomata.

134 Bloor Street West.

REPORT OF A CASE OF SPECIFIC MENINGITIS TREATED BY INTRA-SPINAL INJECTIONS OF ANTI-MENINGOCOCCIC SERUM

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The case of meningitis which I have to report presented several interesting features, but my chief reason for making it the subject of this communication is that the patient was treated by intra-spinal injections of anti-meningococcic serum, and apparently as a result made a speedy and complete recovery.

Meningitis is of so frequent occurrence, especially in childhood, and the form of meningitis of which this case is an example makes up so considerable a portion of the whole number, that it seems most desirable that reports of cases in which the serum treatment had been adopted should be furnished.

So much work has been done in recent years that we now have a very complete knowledge of the nature and causation of the various forms of meningitis.

We know of course that a very large number of cases are due to tuberculous infection either primary or secondary. At the outset the entire number of cases may be divided into two classes, those due to tuberculous infection and those induced by infection from various organisms. In this report we are not concerned with the tuberculous form of the disease.

Regarding simple or suppurative meningitis we now know that the inflammation may be excited by one of several organisms. Most of these infections may be termed accidental, inasmuch as they are frequently active in other parts of the body, while one, the diplococcus intracellularis, is considered to be specific. Accordingly infection by the diplococcus intracellularis is frequently spoken of as specific meningitis.

It has been estimated that 50% of the sporadic cases of meningitis, other than the tuberculous, are due to infection by this specific diplococcus.

The remaining half is made up for the most part of cases due to infection by the diplococcus pneumoniæ and to streptococcic and staphylococcic infection from adjacent disease, chiefly of the ear and mastoid.

Cases may occur in connection with any of the infective fevers. They are, however, few in number.

The diplococcus intracellularis and the diplococcus pneumoniæ produce very similar changes and affect chiefly the same portions of the brain. Both commonly but by no means always excite the most intense reaction in the posterior basic region of the brain.

Pneumococcic meningitis occurs frequently as a primary condition unaccompanied by involvement of the lung.

Regarding the so-called specific diplococcus of Weichselbaum it is found constantly in epidemic cerebro-spinal meningitis and also as has been already mentioned in a very large number of sporadic cases.

It is thought that infection takes place chiefly through the nose and naso-pharynx. Frequently it is thought the inflammation extends along the Eustachian tube to the tympanic cavity. From this point extension to the brain is easy, particularly in young children, owing to the imperfect bony formation in the roof of the tympanum in early life.

It has frequently been noted that injury to the head, such as a blow or fall preceded the onset of the meningitis. Indeed in the case which I have to report, the child a few days before was knocked down and rendered unconscious by a blow from a swing, remaining in that condition for two hours.

Regarding the symptoms in this form of meningitis the most constant and striking are headache, retraction of the head and tonic contraction of the muscles or rigidity.

Opisthotonos is of frequent occurrence and is thought to indicate pronounced inflammation of the cord.

Explanation of these symptoms is found on consideration of the region most profoundly affected, *i.e.*, the posterior basic portion of the brain.

Examination usually shows the structures about the transverse fissure, the cerebellum, the medulla and pons, and the under surface of the occipital lobes to be intensely inflamed, frequently covered with purulent lymph, which can be peeled off as a distinct layer.

Passing forward from this region the inflammation is usually less severe, and similarly the cord shows lessening severity of infection the greater the distance from the medulla.

The increase of muscular tonicity and rigidity is thought to be explained by involvement of the cerebellum. Experimentally retraction of the head results from stimulation of the superior vermiform process of the cerebellum.

Optic neuritis is not frequent in posterior basic meningitis. Much less frequent it is said than in tuberculous meningitis.

Examination of the spinal fluid obtained by lumbar puncture should always be made.

In no other way is it possible to establish a diagnosis of the specific nature of the disease. Particularly is this true with reference to the diagnosis from the cases due to infection from the diplococcus pneumoniæ.

In both cases the fluid shows a great increase in the cellular elements. Frequently it is purulent, sometimes turbid only.

The leucocytes are found to be chiefly of the polymorphonuclear variety.

The diplococcus intracellularis may be found, decolorizing with Gram's stain. The diplococcus pneumoniæ on the contrary being Gram positive.

On August 6th, 1911, a little boy of two was admitted to the surgical side of the Hospital for Sick Children, complaining of headache and irritability. This condition had been present for six days. The child had always been well except for trivial illnesses.

The family history was good, except that one child had had tuberculous glands.

The present illness dated from July 31st, when he had been struck behind the left ear by a swing. The blow rendered him unconscious for about two hours. On recovering consciousness he vomited a dark material, but no fresh blood. No bleeding occurred from the ears, nose or mouth. He since has vomited frequently after taking food.

The child lies on his side with head thrown back and legs and arms flexed. He seems to be in pain.

Has been stupid since the accident, talks very little and will not attempt to walk.

The boy was kept under observation in the surgical ward until August 20th, when the condition showing no improvement, and the idea of possible fracture being abandoned, he was transferred to the medical side.

He lies on his side with head thrown back and arms and legs flexed. He is quiet except when disturbed, when he is very irritable. Pupils are equal and react to light.

There is no squint, and no change discovered in the optic discs.

Movement of the limbs is resisted. Neck is rigid, and any attempt to flex the head causes pain. No paralysis found anywhere. Reflexes are diminished. Kernig's sign positive. No Babinski obtained.

The leucocyte count is increased.

On August 23rd a lumbar puncture was done. Fluid under slightly increased pressure and turbid in character. Cell count about 4,000 per c.m.m.

A diplococcus, intracellular, and thought to be slightly Gram positive discovered. 90% of cells were of the polymorphonuclear variety.

A second puncture was done on August 25th, and although the diplococcus found on the first puncture was Gram positive, simply following the rule in case of turbid fluid and pending further examination, 15 c.c. antimeningococcic serum was injected after withdrawing a like amount of cerebro-spinal fluid.

Examination of the intra-cellular diplococci discovered this time showed them to be without doubt Gram negative, thus establishing the diagnosis of specific meningitis.

On August 27th a second injection of serum 15 c.c. given.

The fluid withdrawn was noted to be less turbid than that from the first puncture.

Aug. 31st.—Head retraction still present. Child is slightly brighter. Temperature which had been 103 fell to normal.

Sept. 6th the note is.—General condition very satisfactory. Head retraction gone. Kernig's sign gone.

Sept. 19th.—Condition good. Patient up. Walks well. Reflexes normal. Appetite returned. No signs of meningeal irritation whatever.

A specially interesting feature in this case is the relation of the disease to the injury to the head.

How long after the injury to the head before meningitis supervened we are not able to say.

A second point of interest is the fact that on the first examination it was thought that the diplococci found were Gram positive, and consequently that they were not specific.

The fault was probably in the stain, as the repeated examination showed the organism to be without doubt Gram positive.

Experience in this case showed that the rule "to introduce the serum whenever the fluid removed is found to be turbid"—is a good one. The serum will do no harm, and repeated examination may demonstrate the specific germ.

THE USE OF ETHER AS A ROUTINE ANAESTHETIC

By Samuel Johnston, M.A.,M.D.,
Senior Anæsthetist to the Toronto General Hospital.

Much has been written, and a great deal of discussion has taken place within the past few years regarding the real merit of ether as an inhalation anæsthetic.

Compared with chloroform, its merit as a routine anæsthetic in general practice has been closely watched, and very freely discussed, and it is the opinion of most physicians who give special attention to anæsthesia that it is the one general anæsthetic *par excellence* that we have at our disposal at the present time.

It is a difficult task to convince many of the older practitioners who have been giving anæsthetics in general practice for many years, and who have never used anything but chloroform, that ether is as easily handled and infinitely safer. They will affirm that they have never had, nor have they ever seen any bad results from chloroform—that it is so much easier to anæsthetize the patient with it, and that there is less post-operative vomiting after its use. Besides that, it is much more agreeable to the patient, and struggling and vomiting at the induction period are much less than with ether.

It is true that the anæsthetic with which one is most familiar may be the easiest for the administrator to handle, but notwithstanding the comfort and ease of the anæsthetist, the patient's safety should always be the first consideration in the choice of the anæsthetic.

If I had to take a general anæsthetic myself, I would prefer taking chances with ether in the hands of an occasional administrator than with chloroform in the hands of a skilled anæsthetist.

To many practitioners this may seem absurd, but I have seen several thousand chloroform administrations, and more than five times as many ether administrations, and from my observation and experience I have found that the immediate and subsequent untoward effects have been much greater with chloroform than with ether.

So far as the comfort of the patient is concerned, this may be accomplished by the exercise of the personal element in which the patient's peace of mind and his confidence are established, and by the administrative skill of the anæsthetist, for there is no doubt that these both combine to make the administration of any anæsthetic a success.

In my own experience if ether is properly given from the beginning the patient will pass into unconsciousness without any unpleasant feeling whatever.

Since the early use of these two drugs as anæsthetics it has been acknowledged that ether is much the safer, but the fact that it never has been as popular as chloroform in routine practice is due partly on account of its physical properties, and more particularly to the old-time method of administration.

When Mr. J. L. Clover in 1876 invented his ingenious gas and ether apparatus, the closed method of giving ether was the only one. This method rapidly produced insensibility with a small quantity of the drug. However, the great disadvantages met with in this method, such as duskiness of the face and general venosity from re-breathing the expired products of respiration and producing asphyxia, the hypersecretion of mucus in the air passages, labored and stertorous breathing, with great heaving of the abdominal walls, followed in nearly all cases by marked headache, nausea and vomiting, have certainly militated against the popularity of ether as a routine anæsthetic, so that chloroform has been resorted to when a smooth, quiet anæsthesia was desired.

But practically all these disadvantages in the administration of ether have been overcome, and this anæsthetic can be given with as much ease and comfort to all concerned as chloroform. This newer method of administering ether is called the "open," or more correctly the "drop," method.

The way I use the "drop" method is as follows: Take an ordinary wire-mesh mask and cover with six or eight layers of gauze, and a drop-bottle full of ether. Begin by holding the mask about four inches from the face, directly over the mouth and nose. Ask the patient to keep his eyes closed; then drop the ether slowly on the mask, when, the vapor being a little more than two and a half times heavier than air, will flow downward over the face.

As the patient becomes accustomed to the vapor, increase the amount; then gradually lower the mask until it is in contact with the face. During this procedure, if the vapor irritates so that it produces holding of the breath, or coughing, do not drop on so much ether.

At this stage the eyes are to be protected; a small towel folded diagonally, placed around the mask in a cone shape, with the apex of the folded towel over the chin, leaving a portion of the mask above uncovered, on which the ether is dropped. If, at

this stage, the patient holds his breath, it is an indication that the towel has been placed in position too soon.

As the patient becomes unconscious, and the breathing becomes more regular and free, the amount of the drug can be increased until the surgical degree is reached. After the operation has commenced, the towel may be turned down and kept in position around the lower margin of the mask, and as anæsthesia advances it may be dispensed with altogether. This depends on the individual patient, as some patients take a great deal more concentrated vapor than others in order to sustain the required degree of anæsthesia.

The difficulty that most administrators meet with, who are not accustomed to giving ether, is to get the patient under the influence quickly enough. Usually they hesitate to drop sufficient ether.

The dropping must be continuous, and increasing in amount from the beginning until the patient is in the surgical degree of anæsthesia.

If those who are called upon to give general anæsthetics will only persist in this method for a few administrations, they will be surprised at their own facility and the satisfactory results on the patient.

The time it takes and the amount of the drug used to reach the surgical degree, of course, will depend on the habits and the physical condition of the patient, as well as on the skill of the administrator. The usual time, however, is from four to ten minutes.

The protection of the eyes, as mentioned above, is most satisfactorily accomplished by taking small pledglets of absorbent cotton, placing them over the eyes to absorb the tears, and over this a piece of rubber dam large enough to cover both eyes and to extend over the eyebrows, with a vent to allow of protrusion of the nose, and which closely adheres to the skin of the face. Over all is placed a flat piece of absorbent cotton, the same shape and size as the rubber dam, with a slit for the nose. This absorbent will catch any drops that may accidentally fall on the face.

The best results are obtained after the anæsthesia has advanced to the surgical degree, if this stage of anæsthesia is limited to a narrow margin between non-surgical and surgical anæsthesia, bearing slightly to the surgical degree. That is, the patient should not be allowed to return to the stage where he may strain, nor again, should he be allowed to pass the margin

in which he reaches a state of profound narcosis, and from which he takes some time to return to consciousness.

After the patient is fully anæsthetized he should not be given any more of the drug than will keep him in this desirable condition during the progress of the operation. The longer the anæsthetic is being given the less of the drug will be required.

With ether given in this way, there is no duskiness, but rather a pink flush, with little or no secretion of mucus; the breathing is free, rhythmic, and quiet, a good pulse, perhaps slightly accelerated, and no straining or heaving of the abdomen. The patient will return to consciousness a few minutes after the withdrawal of the anæsthetic.

Ether, by the "drop" method, may be given to a patient at any age. I have administered it successfully to a patient three days old, and to one of ninety-eight years.

With regard to the amount of ether used by an experienced anæsthetist in the average major operations, for the time, say one hour and a half, not more than half a pound will be required, and sometimes not half this amount; but as in the time so in the amount, it will all depend on the habits and physical condition of the patient.

Alcoholics and strong, robust patients take a great deal more than non-alcoholics and the weak and debilitated, or those suffering from shock.

In discussing ether as a routine anæsthetic, the question of contra-indications comes up. I may say here that I meet with very few cases in my practice where I have to resort to chloroform or even the CE mixture.

In acute inflammatory conditions of the lung or of the kidney, or when I find that ether irritates at the beginning, I use CE or chloroform during the induction period, and then sustain the anæsthesia with pure ether.

It has been the custom, and is yet by most practitioners, to give chloroform in obstetrical work. I may say that I always give ether when administering for obstetricians, and find from my own observation, and from information collected from physicians who use ether by the open method in this work, that the results are more satisfactory. There is not so much shock, and there is less tendency to hæmorrhage.

I always administer ether in thyroid cases, and in trephining operations, and have not found, when properly administered in this way, any undue congestion or hæmorrhage, which has so often been charged against ether as an anæsthetic in these cases,

and which, no doubt, does apply to any method where the air is restricted.

It is to be hoped that general practitioners will soon realize the importance of the choice of an anæsthetic which will give the patient the best chance for his life. I do not hesitate to say, as the use of ether increases in general work, that fewer deaths will lie at the door of the anæsthetist.

THE PRACTICAL MANAGEMENT OF PULMONARY TUBERCULOSIS

By F. S. Minns, M.B., Toronto.

The early diagnosis of the disease is the most common subject for a paper dealing with Tuberculosis. Other equally scientific phases of the subject are largely dealt with. University and hospital clinics are mainly taken up with the study of the etiology, pathology, diagnosis, prognosis, and incidentally, the treatment.

From an experience gained in sanatoria, laboratory, hospital, dispensary, clinic, private, and consulting practice, I have often felt the need of some available means of supplying information on the practical management of tuberculosis. This is a phase of the question which is frequently considered quite secondary to the clinical aspects. The details given will be for the purpose of giving a better grasp of certain principles of treatment, which will result in a wider realization of how much can be done to add to the welfare and comfort of a consumptive.

THE EXAMINATION OF A PATIENT IN YOUR OFFICE.

Never do the examination if you are in a hurry. You cannot do much in the way of a chest examination in less than an hour.

Make a complete physical examination of your patient before you take a history. Thus will you avoid being too much influenced by unreliable statements, made intentionally or otherwise.

Cover the patient's mouth and nose with a large folded cheesecloth or gauze handkerchief. Do this always in both up and bed patients.

Examine especially the chest, eyes, ears, nose, throat, abdomen and genital organs.

Never consider that you have examined a chest unless you strip your patient of every layer of clothing down to the waist. Have your patient sit up. Signs in tuberculosis cannot otherwise be truly interpreted.

Make a written record of all you find and observe. This can be done in part at least while the patient dresses.

Take your complete history after this, paying special attention to obtaining a history of personal infection from a previous case—in the home, at work, or at play. To previous diseases as la grippe, bronchitis, asthma, typhoid fever, or conditions diagnosed as such.

Then do not commit yourself to a diagnosis unless you are absolutely sure of your findings, but, by the care and thoroughness of your examination, gain the patient's confidence, and on the strength of this, suggest the necessity of obtaining more data and of further study of your findings.

Then examine the sputum, blood, urine, any secretion or discharge which might aid, sections of tissues. In the case of the urine, take the precaution to rule out smegma bacilli and other acid-fast bacilli. This may best be done by Bunge and Tranteroth's method.*

Do one or more of the common tuberculin tests. Von Pirquet is probably the best, using 50% solution of Koch's O. T.

Have an X-ray taken of the chest.

Examine the chest again and again, at different hours and under different conditions.

Inoculate a guinea-pig if indicated.

When you make a diagnosis of pulmonary tuberculosis do not give a definite prognosis, because "if you do you will suffer the mortification of being generally wrong." Rather ask for one month in which to study the progression of the case, and after a second examination, speak with reserve.

I know of no case in which a frank statement of one's conception of the findings has shocked an individual to the degree of being injurious. So be frank; do not use such stock expressions as, "Oh, you only have a little bronchitis." "All you need is a little building up."

Or do not go to the other extreme of saying, "You have about three months to live." "There is not a ghost of a chance of your getting better."

When you have made your diagnosis, then comes the question of what is best for the individual and the management of the case, as you see it, narrowed by the force of circumstances—domestic, social, and financial.

When you send a patient from your office, map out for him a working plan of an ideal day as best you can from a consideration of his case.

Give your patient something to do for you, as keeping a temperature record for two weeks in a properly ruled notebook. Records to be taken at regular intervals of two or four hours,

*Bunge and Tranteroth's method: After fixation of the smear, the fat is removed by soaking the slide in absolute alcohol. Then the preparation is laid in a 5% solution of chromic acid for fifteen minutes. The chromic acid is then carefully washed out in several changes of water. The slides are stained with carbol-fuchsin, decolorized with 16% sulphuric acid for three minutes, and then counterstained for five minutes in a concentrated alcoholic solution of methylene blue.

also before and after meals, before and after rest periods, before and after physical, mental, emotional, and sexual excitement.

I know of no case in which this was harmful to the patient, if taught the significance of changes in the register.

Also suggest the use of a small pocket notebook in which to record signs, symptoms, weight, suggestions from outsiders for treatment, such as creosote, cod liver oil, tuberculin.

Then, when he consults you, it will be about something he desires to know concerning tuberculosis as it affects him, or in a general way.

When you see a patient at his home, make your examination as previously outlined. In this case, be sure to get your patient sitting up, out on a chair, if possible. Never be content with an examination of a patient lying in bed. This applies to children also.

The management was comparatively easy in the past, because the outlook was considered hopeless and the contagiousness was minimized. At home the prescription was whiskey, cod-liver oil, creosote, and morphine, or as a first or last resort, "Go West," or "Go South."

But in a disease with such a strong tendency to recovery, and because of the extensive educational and governmental campaigns carried on by different associations for its restriction, the general public, and the profession, are recognizing the curability of the disease, and now the patients almost invariably ask: "What am I to do, Doctor, to get better?"

The treatment of tuberculosis aims at the establishment of an immunity on the part of the infected organism to the tubercle bacilli and its toxins, and in this respect is not different from other diseases of bacterial origin.

Rest, fresh air, proper diet, hydrotherapy, are still our sheet anchors. But your conception of these must be explicitly explained to the patient. I am in the habit of giving, with slight alterations for an individual's needs, the following printed instructions:

Rest.—Retire in time to get at least nine hours' rest in bed. This means 63 hours a week. We are not machines, and cannot be so run. But two hours lost to-night must be made up this week.

Rest as many minutes before eating as possible.

Rest in a reclining position after eating; no physical or mental work. Breakfast, 15 minutes; lunch, 30 minutes; dinner, 60 minutes.

Fresh Air—Sleep alone in a room with the windows open top and bottom, and the door shut.

Never miss an opportunity to be outdoors at work or at play, night or day. Night air is better than day air, and the air is better after a rain than before it.

Diet.—Your stomach is the key to your existence. Do not abuse it in ways such as:

Taking food when you are tired.

Taking very cold food or drink, at the beginning or end of a meal, as ice-cream or ice-water.

Taking very hot fluids to begin or end a meal, as highly seasoned soup or tea.

Take little or no fluids with meals, preferably one hour later.

Take only the plainest of foods, clean, fresh, wholesome, raw or cooked.

Take only moderate amounts; never stuff; never too much of any one thing; mixed diet is the best.

Take very little salt, pepper, or other condiment.

Hygiene.—Take two warm baths a week, at bed-time.

Sponge arms, back and chest every morning with cool water, never cold enough to be chilly.

Cleanse the mouth before meals, teeth after each meal; keep teeth in as perfect condition as possible.

Keep feet and legs warm and dry. It does not matter so much about the rest of the body if this is done.

Exercise.—The best exercise is that derived from the routine of one's work, plus any special exercises as prescribed.

Should not encroach on rest periods.

Five minutes spent in simple movements, without apparatus, before retiring, will be decidedly beneficial in producing sound sleep, toning up the circulation, and muscular development.

To be more explicit: Rest, with regard to meals, I have spoken of. Rest, with regard to temperature, should be somewhat as follows: Under 99°, no restriction; under 100°, considerable rest in a reclining position; over 100°, rest in bed the larger part of the day; over 101°, rest in bed all the time. In

several cases with continuous high temperature, I have found a marked improvement to follow a change after four to six weeks' rest in bed, by getting the patient up and allowing light exercise.

With regard to pulse, as follows: Under 100, no restriction; from 100 to 120, no work or exercise; over 120, rest in bed.

Fresh Air.—Dread of fresh air is the chief cause of tuberculosis. He who combats this dread does as much for the prevention of tuberculosis as he who fights the bacilli. The more time spent comfortably in the air of the outdoors the better. Night air is no exception. As one might ask, "What other air is there at night but night air?" The dampness of night air is not something to fear.

When the barometric pressure is extremely high or low, or following rapid changes from one extreme to the other; when the degree of humidity is great; when the amount of precipitation is large; and when the wind is of high velocity, and especially from an easterly direction, it is best to remain quietly indoors.

Tuberculosis patients are sometimes puzzled by conflicting medical advice on the subject of climate in its relation to the treatment of their disease. This is not surprising, for at one time or another almost any combination of known atmospheric conditions was considered to constitute a climate which had protective or curative qualities. No region, however, has long continued free from tuberculosis after being reached by our modern civilization. Neither the salts in the sea air, the ozone of forests, nor the rarefied atmosphere of mountains are curative in themselves; they simply typify an outdoor life. The following expressions are representative of medical opinion:

Baldwin: "Change of climate is often of great value, but it is inadvisable for patients who are unable to command a minimum of $10 a week to leave home."

Flick: "I desire to go on record as believing that there is no therapeutic value in climate."

Anders: "In any case of tuberculosis, that climate is best in which the patient feels well, eats well, sleeps well, and gains flesh and strength."

Latham: "That as far as possible all patients should be treated under the same climatic conditions as those which they are likely to experience in their subsequent life."

Walsh: "If a case of tuberculosis cannot be cured in its home climate, it cannot be cured anywhere."

Osler: "Climatic treatment, after all, is only a modification of the open-air method."

Bonney: "In all cases, climate selection becomes for the patient a question of individual fitness."

If we grant that there are differences in climates, just as there are differences in houses, still, excellence of climate is no more essential to a cure than excellence of some other things, and there is no climate so good that it will always make up for the increased work, or poorer housing, or scantier fare, if necessitated by a change.

On the other hand, unfavorable climatic conditions, such as oppressive heat, irritating dust or smoke, extreme cold, or an atmosphere of melting snow and constant fog may exercise such a bad effect on a case fit to travel that a suitable change of climate becomes an urgent necessity, and should be undertaken, even at considerable sacrifice.

As a routine procedure, however, the practice of advising a change of climate to a distance is unwarranted.

A progressive case of long standing, with abdominal organs already damaged by terminal changes of the disease, and dependent on nursing for comfort, is in no condition to be benefited by a change of climate.

Unfortunately, the evil results of exiling the hopeless cases are not so apparent to those responsible for it as to those among whom the unhappy sufferers go, for there is no picture more miserable than the boarding-house or sanatorium life of a consumptive, hopelessly ill among strangers.

It cannot too frequently be repeated that each case must be decided individually. A delicate, anæmic woman, who feels the cold keenly and cannot be trained to face verandah life in the damp rigors of a Canadian winter, is so much benefited by a sojourn of three months in some Southern winter resort, where the outdoor life can be comfortably followed, that the advantages of the temporary change outweigh the pangs of homesickness. One with flagging digestion and relaxed nervous and vascular system, sweltering in the heat of a Southern July, may find a removal to the sparkling air of Muskoka, or from the "Ward" to the lake shore to the east or west, or the island to the south, or the "Hill" to the north, a life-saving measure.

Before recommending a change of air, be sure you have given your own a fair trial. Tuberculosis exists in most countries in the world, and the death rate in each does not depend on the quality of the air.

It must be confessed that it requires considerable courage on

the part of the family physician to recommend "no change." The layman is more ready to do "some great thing" than to bathe seven days and nights in the outdoor air of home. Indications for or against a removal are sometimes found in the home itself. A nervous man or woman may need to be taken from a turbulent household of lusty children, while, for a differently constituted case, congenial relatives are indispensable for content. Though, from a close study of 500 cases in sanatoria, I believe more are handicapped by domestic infelicity, and this will account for many a relapse on a return to the home from a sanatorium. Extreme measures are sometimes necessary to get a careless patient away from helpless associates; or, on the other hand, to save an invalid from false ideas of treatment at the hands of ignorant relatives.

It is often easier to persuade a patient to enter a sanatorium at a distance than one near home, and sometimes an adult male can be persuaded to abandon his business pursuits only by radical removal from the scenes of his activities. Especially is this true of physicians. Young adults welcome a change, whereas, one past middle life, with strong home attachments for home scenes, may consider it a hardship.

It should be remembered that there is no all-the-year-round climate for the average consumptive. It is sometimes not so much the climate to which the patient goes as the climate from which he is taken. When crowds of well people at vacation time get out of a hot city to the nearest cool resort, the doctor may well advise the same relief for his consumptives. The most frequently indicated change is one to avoid excessive heat, for it is now realized that, making allowance for idiosyncrasy, cold air is especially stimulating to metabolism, and therefore peculiarly suitable for the treatment of pulmonary tuberculosis. The tonic effects of cold air, with increased appetite and power of assimilation, account for many of the good results ascribed to dryness or elevation.

Therefore, in deciding whether a case of pulmonary tuberculosis should have a change of climate, temporary or permanent, remote or near, one must not be bound by any rule, but guided in each case by all attending circumstances—by the patient's age, sex, and social condition, wealth, temperament and desires, by the stage and activity of the disease and its complications. For it is safe to say that no place is so unfavorably situated that a general recommendation for a change can be made, and none so fortunate in its location as to preclude the possibility of a removal

Food.—In addition to the preceding general remarks, there might be added that what is good and what is not good must vary with the individual, because of personal likes and dislikes, early bringing up, and idiosyncrasy. The following "dont's" are given by an authority, who says tuberculosis is a disease where the treatment is almost dietetic. Don't take: Fried foods, salt fish, hashes, gravies, veal, pork, carrots, turnips, cucumbers, sweets, macaroni, pies, pastry, wines. To all of these "dont's" one might take exception in order to point out that it is not a disease you have to feed, but a person. The fad of forced feeding is going, I trust never to return, for the worst cases it has been my lot to have to treat have been those who have been maltreated in this way. Seventeen eggs a day was the record in one case. Emphasis should be given to the necessity of supplying, not luxuries, but milk, butter, eggs, cream, meat, fresh fish, fruits and vegetables.

There should be no difficulty about a prejudice or dislike that many assert for milk or eggs. If this exists, there are many ways of making them a large part of the patient's dietary unknown to the patient, as giving milk in soups, broths, and added to made-up dishes.

Food is of more value than medicine, and should be taken at regular intervals, regardless of an appetite. All foods are not of equal value. Other things considered, endeavor to get the maximum food value in the food taken. Lunching between meals may best be discouraged. When taken, let it be something fluid in the morning, as an egg-nogg; in the afternoon, solids, as bread and butter; and at night, a warm drink, as lemonade or cocoa.

Hydrotherapy.—This has already been mentioned. Dettweiller said: "The tubercular patient is as much skin-sick as lung-sick. Neglect of the skin lessens a man's power of resisting bacilli.

Tuberculosis is a contagious disease. Every existing case contracted it by breathing in or swallowing the germs which cause it. It is probably never inherited. It is preventable, but it cannot be handled by health authorities like the quarantinable diseases, because it is too common and too chronic. Contagion to others is from the sputum, fæces, urine, vaginal discharges, other discharges and secretions. It requires an intimate exposure to the disease, such as occurs when one sleeps with a known consumptive, or visiting friend suffering from consumption, uses the same drinking cup, dishes, towel, tools, instruments, work materials, or shares a room day after day with a

careless patient, who spits on the floor or coughs with uncovered mouth, or mouth covered in the customary manner with the bare hand. No one is so healthy or so strong that he may not at some time contract tuberculosis, although robust health is a most valuable safeguard. Even an occasional exposure to the infection has some danger, and it is needful to protect cars, boats, waiting-rooms, restaurants, and all public places from infection by careless patients.

All intelligent people should work to spread the important facts about tuberculosis. So, when explaining things to a patient, make your language as simple as possible; don't talk over his head; don't be too technical; never be mysterious.

Explain germs; what they are; how they grow; how they are carried from one place to another; how to destroy them.

They may be destroyed by fire, hot water, chemicals, but not by freezing. One of the best methods is by boiling articles such as dishes, bedding, handkerchiefs, clothing, napkins, towels, etc. Articles which would be injured by boiling can be rendered safe by being hung in the sun for two or more days. With regard to dishes, the patient should have his own, which are not to be used by anyone else.

Antiseptics are of little practical value, around the house. The practice of putting chloride of lime, formalin, carbolic acid, sulphur, or other antiseptics, into sinks, or in basins placed in the sick-room is useless. Germs, living in the air, in the dust on the walls, and carpets, or in the dirt in the corners, are in no way affected by antiseptics placed in these basins. Moreover, no antiseptic solution, sprinkled or mopped on the floors, walls, or furniture, is of any use unless the surfaces are kept soaked with it for several hours, and not then unless the dirt had been previously removed to allow the fluid access to the objects. Soap and water for the floors, and a wet cloth with which to wipe the furniture, are the best agents to combat infection. A vast amount of money is spent on much-advertised, but worthless, antiseptics.

Paper handkerchiefs or small individual ones made out of almost any material are best to hold in front of the mouth when coughing, and to wipe the lips, after which they must be burned. A bed patient may have a small pile of small squares, 4 in. by 8 in. on one side of the bed. Use a clean one every time to cover hand and mouth when coughing; then fold inwards, dropping it then into a paper bag pinned to the other side of the bed. In this way it is possible to fairly well control the bed patient when awake. When asleep, the patient will infect his bedding by coughing and by an overflow of the mouth secre-

tions, so that his bed and within a radius of ten feet are the most dangerous zones. When able, the patient should make his own bed. If confined to bed, then the nurse, professional or otherwise, should take the precaution of wearing a mask made of a cheese-cloth handkerchief. How much more is this indicated than the ordinary dusting-cap so frequently worn. Have all bedding boiled before being washed.

Tooth-brushes and all toilet articles should only be used by the patient, and should from time to time be sterilized. 'Tis best for the patient to have his own basin for all washings other than his bath because of the tendency to expectorate at this time.

The face, and especially the hands, should be very frequently washed.

Tell the patient never to kiss anyone. The ordinary advice is not to kiss anyone on the mouth, as if the transference of sputum with bacilli from the forehead, hand, or back of the neck was any more defensible.

Instruct the patient never to swallow what is coughed up. Endeavor to swallow only food and drink after the mouth has been cleansed. The bacilli may be carried to a new growing ground other than the lungs.

Do not let flies get at spit cup or about sputum anywhere.

Insist on patient being clean-shaven.

If the sexual relations are to continue, insist on clean mouth, teeth, hands, nails, and that the sick one go to the well one's bed.

I do not advocate the use of tents, because I never saw but one that was properly ventilated. The same applies to specially constructed shacks at home. The best accommodation at night is a well-warmed bed and room, enclosed verandah, or balcony. Freezing people by inches does not cure tuberculosis. Most of the cough of which patients complain after retiring, other than that due to position, is, I believe, due to the chilling of the surface of the body on getting into a cold bed. The bed should be thoroughly warmed. Use hot-water bottles; ordinary gem jars do very well. In special cases, with heart or kidney complications, or personal idiosyncrasy, a continuous heat will be found beneficial. Leave the hot bottles in the bed, or use an electric pad, placing it out of reach of the feet, or a home-made device made as follows: Take an ordinary galvanized iron pail and puncture a hole in the centre of the bottom. Fasten in a piece of sheet tin, half down or more, in which is firmly fixed a socket for an electric bulb. Fasten one end of an extension wire to the socket and run wire out through the hole in the bottom. Make

a cover for the pail out of wire netting. The pail is to be placed in the bottom of the bed, lying on its side, with the top pointing upwards. The extension may be connected to any electric fixture. The lamp used may be of from 5 to 32 candle-power, varying according to the degree of cold. The wire netting prevents the feet coming into contact with the lamp, which gives off the necessary amount of heat. The pail, moreover, raises the heavy bedding off the feet and lower part of the legs. The extension may be so arranged that the power may be cut off at any time.

To avoid drafts about the shoulders, use two pillows placed in the position of an inverted V, and then tuck in the bedding.

Cough will be the most frequent complaint that the patient will ask you about for relief. Coughs may be divided into classes. 1st. Beneficial, producing expectoration. 2nd. Harmful, which produces no expectoration. The first requires no treatment other than to convince the patient, if possible, that his cough is of this type, and so requires no treatment. The second requires some careful investigation before prescribing. This because it produces an injurious effect, viz., by delaying the process of healing; by wearing and exhausting the patient; by inducing vomiting. This type of cough should be reduced 75% by avoiding over-exertion, rapid walking, rapid and loud talking, laughing, singing, running, inhalation of irritants, such as dry air, vapors, smoke, dust, chemicals; by teaching and encouraging the patient to use will-power. Determine, if possible, if there is a cause outside the chest. Examine the nose for polypi, uvula, pharynx, larynx. Try inhalations, sprays, rest in bed, change of position, hot water.

The patient should be given some explanation of the ordinary causes of fever, such as over-exertion, excitement, coryza, constipation, so that these may be avoided. The most efficient measure is rest in the open. Tepid sponges, followed by an alcohol rub. Full diet should be given unless the fever is due to intestinal disturbance.

Patients suffering from tuberculosis should avoid other persons ill with a contagious disease.

Alcohol has no place in the treatment of tuberculosis, because in a disease in which the need for and the result of stimulation is so easily apparent to the patient, its use soon merges into a persistent abuse. Never use as a food. As a medicine, never use continuously.

Tobacco.—Its use should be discouraged. One authority says that no such chronic disease as tuberculosis will ever get well if

its use is persisted in. Warn patient of the possibility of spreading infection from the mouthpiece of pipe. Wright shows that nicotine lowers the tuberculo-opsonic index of the blood. Post-mortem examinations made at the Phipps Institute showed that smokers are twice as subject to tuberculosis as non-smokers.

As regards clothing, linen should be the material of choice to wear next to the skin. No underwear should be worn in bed, and no chest protector should be worn at any time.

In conclusion, let me say that the management of tuberculosis is not a simple matter. It requires a considerable knowledge of humanity in its various industrial and social grades of life. It requires great resourcefulness, tact, and sympathy. In fact, practical management is of more help to the patient than medicines. It requires an intelligent application of general principles to individual cases. Fresh air is of some value, but fresh air properly applied is of much more value; hydrotherapy is useful, but it must be suited to the patient and the disease. Tuberculin must be given to suitable cases at the proper time and in proper doses. In short, the physician who treats tuberculosis should be conversant with all methods of value; should appreciate fully their limitations, and should know how to apply them with skill and intelligence.

Cor. of Gladstone Ave., and Dundas St.

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, F. A. CLARKSON, BREFNEY O'REILLY AND F. C. HARRISON.

Sodium Citrate in Acidosis

Lichtwitz advocates sodium citrate in place of sodium bicarbonate for the treatment of acidosis. He claims that sodium citrate is practically tasteless, and may be added to food and also given dissolved in water, with the addition of lemon juice. When given in this way it makes a very pleasant drink. Sodium citrate causes much less disturbance to the digestion than sodium bicarbonate. He has given sodium citrate up to 50 gm. a day; it has not caused diarrhœa, that sometimes results from large doses of sodium bicarbonate. He also adds that it is theoretically possible to give sodium citrate solution by subcutaneous injection, while the strong alkaline reaction of sodium bicarbonate solution prevents its use subcutaneously. However, he has had no personal experience with subcutaneous injections with sodium citrate.—*Progressive Medicine.*

Typhoid Spondylitis

After Fränkel had shown that in typhoid fever the medulla of the vertebræ contains a large number of the bacilli of Eberth, even when these are few in the blood, Quinke published the first cases of typhoid spondylitis and Stender adds two new cases. This disease begins during typhoid convalescence, or sometimes months later, with pains neuralgic in character, fever, and the symptoms of ordinary spondylitis; pain and pressure over the spinal apophyses; vertebral rigidity. The symptoms of medullary compression are inconstant and transitory. The disease, after weeks or months, is cured, without giving rise to abscesses. The pathological changes are not clear, as there are no cases in which there was surgical intervention or autopsy.

Acute pyogenic vertebral osteomyelitis begins with chills, high fever, severe pain on pressure over the apophyses; severe medullary symptoms; termination nearly always fatal. There are

forms of traumatic spondylitis, in which one cannot prove a fracture or luxation, which resemble closely typhoid spondylitis. The only clinical difference is that the fever is slight or absent. Tubercular spondylitis is marked by the longer duration of the attack and lesser intensity of the neuralgic pains. The medullary symptoms are often more severe. (Translated from *Giorn. Internaz. delle Scienze Med. by Harley Smith.*)

Empyema from Paratyphoid B Bacillus in the Course of a Paratyphoid

Costa and Clavelin relate the history of a patient, who, after four weeks of an ordinary typhoid attack, when the indications of convalescence were showing themselves, complained of a pain in the left thoracic region, and soon manifested other symptoms of a pleuritic exudate. Exploratory puncture gave a reddish, turbid liquid. Pleurotomy was performed, and about two litres of this liquid obtained. Rapid improvement followed. Culture of the liquid gave a short, mobile bacillus, which presented all the cultural and biological characteristics of the para-typhoid B bacillus. (*Translated by H. S.*)

Haemorrhage Under the Dura Mater in a Case of Typhoid Fever

Caussade gives the history of a patient admitted to the hospital suffering from apathy, torpor and somnolence. These meningeal symptoms became accentuated during the week following and soon after there appeared all the classical signs of typhoid fever. The serum diagnosis was positive (1 in 100). On the sixth day there was some muscular rigidity, transformed at once into true contracture with trismus. Lumbar puncture gave a sanguinolent liquid, coming evidently from the subarachnoid spaces. Some days afterwards, the patient died. There were found, on autopsy, a recent hæmorrhage under the dura mater and an old pachymeningitis. On histological examination there were seen the changes characteristic of acute meningitis, with an infiltration of polynuclears into the dura mater and the arachnoid. Caussade maintains that if the typhoid infection has reached the meninges, it is due to persistent pachymeningitis which has attracted the infection thither. (*Translated by H. S.*)

Meningitis with Typhoid Bacilli in the Cerebro-Spinal Fluid

In a patient who presented the clinical picture of a severe meningitis, lumbar puncture showed that the pathogenic agent was Eberth's bacillus—a true typhoid meningitis. Stuchmer has discovered, in literature, eight such cases, in all of which Eberth's bacillus was found in the cerebro-spinal fluid during life. In all of these, the essential symptoms of typhoid were absent, so that the diagnosis was difficult. At first, one has to diagnose from tuberculosis and septicæmia. Later, when the clinical picture becomes that of a true meningitis, the diagnosis is still obscure. Here, lumbar puncture will assist us not only in diagnosis, but in prognosis; because the prognosis of typhoid meningitis is more favorable than that of tubercular. Of Stuchmer's nine cases, six recovered. Lumbar puncture is also useful as a therapeutic measure. (*Translated by H. S.*)

OBSTETRICS AND GYNAECOLOGY

IN CHARGE OF ADAM H. WRIGHT, K. C. M'ILWRAITH, FRED. FENTON, AND HELEN MACMURCHY.

Therapeutics of Ergot—History of its Employment in Labor

To-day one is accustomed to hear the remark when anything new is mentioned—"That was known in China thousands of years ago." There is, however, good ground for believing that the therapeutic uses of ergot in labor were known in China from ancient times, for Stanislas Julien, writing in "Comptes Rendus, etc.," for 1849, tome XXVIII., p. 196, says, *"J'ai vu par example que depuis bien longtemps les Chinois usage du seigle ergoté pour hâter les accouchements laborieux."* But that "museum of embryos," as Victor Hugo has called China, has both forgotten its use and has failed to pass the knowledge on to others.

In the Highlands of Scotland the wise women, as the midwives were called, employed ergot in lingering labors, from the earliest date up till the period when they resigned their office to the man midwife. They probably employed ergot of barley or ergot of oat, for rye was never generally grown in these northern parts. It is likely that at one time quantities of the grain grown there became ergotised, but epidemics of ergotism would not be widespread if ever it did become epidemic, for the good reason that in those early days proportionately little grain was cultivated, and hence the people were not so dependent on cereals for food as the peoples of continental countries were. To-day one sees in many parts of the Highlands small patches of a field of oats which have become blighted, that is, affected by the ergot fungus.—*Med. Mag.*

The Treatment of Persistent Occipito-posterior Position of the Vertex

It is always well to make an attempt to convert an occipito-posterior into an occipito-anterior presentation before labor if possible. If diagnosed in the later stages of pregnancy, and before engagement has taken place, the patient should be placed in the knee-elbow position for a short time twice a day during the last two weeks. By this means it is claimed that the presentation will often become occipito-anterior. A more certain method is to

rotate the child forwards by abdominal manipulation during the early stages of labor.

Whilst the great majority of cases of occipito-posterior presentations rotate forward naturally during the descent through the pelvis, the head may be delayed at any point of its course, and operative interference may be necessary.

(1) If the vertex remains above the brim help must be given by forceps or version. The writer is inclined to recommend version as the preferable operation, unless the surgeon has had considerable experience of the high forceps operation.

(2) The vertex may be delayed in the pelvic cavity. Here deficient flexion is often the cause, and if the forehead is pushed up during a pain the occiput will usually descend and rotate forwards. If this fails forceps are required.

(3) If the head reaches the floor of the pelvis with the occiput still posterior, Dr. Brodhead recommends that it should be rotated with forceps. This has by many authorities been held to be dangerous, as likely to cause injury to the child, especially if the trunk does not follow.

The forceps should be applied to the sides of the child's head and passed with the concavity of the pelvic curve forwards in the usual way. By gentle rotation, a little at a time, the occiput will turn gradually forwards, and the trunk will usually follow it.

This can be verified by abdominal palpation. Notes are given of eight cases of persistent occipito-posterior positions in which by this method rotation was produced and delivery effected in each instance. The child suffered no ill-effects from the rotation.

A method which will be found very useful in these cases is manual rotation of the occiput forwards. At the same time a hand placed on the abdomen may push the anterior shoulder forward. If this fails, rotation by forceps should certainly be tried in preference to delivery with the occiput-posterior, which is very liable to cause extensive injury of soft parts.

The diagnosis of occipito-posterior presentation in the later stages of labor is sometimes difficult. A careful examination should be made, under chloroform if necessary. It is a point worthy of note that if the forceps are applied in the usual way in these cases the handles do not readily assume their natural position, viz., that of resting on the floor of the perineum.—G. L. Brodhead, *Amer. Jour. Obst.*

Solitary Hepatic Abscess in Pregnancy

Chavannaz and Loubet (*Rev. de gynec. et de chir. abdom.*, December, 1911) have studied a series of cases where a large and single abscess developed and set up symptoms during pregnancy. This complication simulates the big tropical abscess, and must not be confounded with the more frequent suppuration of the liver not unknown after puerperal infection, where numerous collections of pus are scattered over its substance. The solitary abscess, however, seems to be a very deadly complication—as bad, in fact, as disseminated suppuration. Five cases, including one under Chavannaz and Loubet's own observation, have been recorded with fairly complete details. Neither dysentery, typhoid, or appendicitis had troubled any of the patients. In none was there any evidence of injury. Careful observation seemed to prove that the abscess began to develop during pregnancy in all the collected cases. The infection, no doubt, arises in the intestine. In pregnancy and the puerperium the virulence of the *Bacillus coli* is greatly increased, hence the frequency of auto-infection. It is, therefore, rather remarkable that the complication in question is rare. The abscess is nearly always single. The amount of pus was considerable—at least half a pint—whilst in one case the liver was almost entirely converted into a vast abscess cavity. In three the pus was sterile, and in one only were microbes found in quantities. The *Bacillus coli* abounded, and there were staphylococci which seemingly played a secondary part in the infection. Local pain in the right hypochondrium or base of the right thorax is the chief symptom, and it is generally severe, but does not radiate to the shoulder. Dyspnœa and fits of coughing without hiccough seem frequent. In no instance was distinct jaundice reported. The prognosis is very bad. In the author's case the patient suffered from eclampsia and glycosuria, the abscess developing in the puerperium. It was incised, and fortunately there were free adhesions protecting the peritoneal cavity. Over three pints of pus came away. Seven months later the patient seemed well and had gained flesh. Free incision is the only treatment for large abscess of the liver in pregnancy.—*B. M. J.*

Editorials.

BOVINE TUBERCULOSIS

We are indebted to Dr. George D. Porter, the Secretary, for a report of the transactions of the Eleventh Annual Meeting of the Canadian Association for the Prevention of Tuberculosis held in London, May, 1911. A very interesting address on Bovine Tuberculosis and Public Health was delivered by Dr. Schroeder, of Washington. It will be remembered that at the British Congress on Tuberculosis, at London in 1910, Koch caused much surprise and some consternation by deliberately stating that in his opinion human and bovine tuberculosis were not identical, and that the latter was not a source of danger to public health. On the other hand, Prof. Arloing, of Lyons, contended for many years that the virus of human and bovine tuberculosis was one and the same.

Koch's statement promoted very careful investigations respecting tubercle bacilli and tuberculosis. These investigations appear to have proved without question that as a rule the human bacilli are different from the bovine bacilli, but at the same time the latter are a grave source of danger to the public health.

Dr. Schroeder's conclusions may be summarized as follows:

1. It has been proved absolutely that bovine tuberculosis is responsible for a not yet well defined proportion of human tuberculosis.

2. A large proportion of tuberculosis in children is chargeable to the bovine source of infection.

3. Tuberculous cows sometimes expel tubercle bacilli from their bodies in a dangerous way before they are visibly diseased.

4. The satisfactory protection of public health against tuberculosis due to infection through bovine sources requires that we should either pasteurize or sterilize all milk, or obtain it from cows proved to be free from tuberculosis by the tuberculin test.

THE INSURANCE ACT

The Insurance Act of Great Britain has become law, but will not come into operation for some time. It cannot come into operation until July 15th, and the Privy Council has power to postpone the date until January 15th, 1913. The administration of benefits will not begin until six months after the date at which the Act comes into operation. It seems unlikely at present that the administration of these benefits will begin before July, 1913. It is hoped by many that before that time the Government will concede, "the six cardinal points" respecting which we have heard so much. In the meantime the hostility of the profession towards the terms of the Act appears to be increasing instead of diminishing. There has been a good deal of discussion respecting the position of Dr. Smith Whittaker, formerly the Medical Secretary of the British Medical Association. Early in the negotiations between the representatives of the Association and Mr. Lloyd George, Dr. Whittaker was offered and accepted the post of Insurance Commissioner at a salary of $7,500 a year. It was at first considered that this appointment met with the full consent of the leaders of the British Medical Asso-

ciation and would be considered satisfactory by the profession, but recently strong indignation has developed against both the Council of the Association and Dr. Smith Whittaker.

The New York Medical Journal in commenting on the situation expresses the opinion that the rank and file have been left to fight out with the local insurance companies many points which should have been included in the Bill. It appears to be a foregone conclusion that many practitioners in many districts will have to submit to low terms offered by the Government and the Friendly Societies. The leaders of the British Medical Association have proved but a broken reed to rely upon and failed in the hour of need. If the Government brings the Act into operation in its present form, "England will have received a blow from which it will probably never recover."

INTERNATIONAL MEDICAL CONGRESS

Recent communications from London, England, indicate that the XVIIth International Congress of Medicine to be held there in August, 1913, is to be of great scientific and Imperial importance. We have mentioned before that it was the intention of the President to give representation of the profession in the Overseas Dominions on the Committees of the Congress and the various Sections.

We are now in a position to state that the President desiring to pay the Canadian profession a compliment has alloted two places on the British Executive and six places on the British Organizing Committee. In addition Canadians have been selected as Vice-Presidents of several of the more important sec-

tions, as well as placed on the councils of the various sections. Altogether over fifty members of the profession in Canada will be thus officially associated with the Congress. There is no doubt that it is owing to the sympathetic attitude of the President, Sir Thomas Barlow, the Honorary Secretary, Dr. W. P. Herringham, and the President of the Section in Medicine, Sir Wm. Osler, that such representation has been given to Canada.

The Canadian National Committee is composed of the Deans of five medical faculties, namely, Dr. C. K. Clarke, Dean of the Medical Faculty, University of Toronto; Dr. J. C. Connell, Dean of the Medical Faculty, Queen's University; Dr. H. H. Chown, Dean of the Medical Faculty, Manitoba University; Dr. E. P. Lachapelle, Dean of the Medical Faculty, Laval University; Dr. F. J. Shepherd, Dean of the Medical Faculty, McGill University; Dr. George Armstrong, Montreal, and Drs. A. McPhedran and W. H. B. Aikins (Secretary), Toronto.

CANADIAN MEDICAL ASSOCIATION

The next meeting of the Canadian Medical Association will take place in August next, lasting two days, in Edmonton, and one in Calgary. We are told by the President, Dr. H. G. Mackid, of Calgary, that a special train will leave Montreal, carrying the doctors from Quebec and the Maritime Provinces. This train will pick up the Ontario contingent at North Bay and Port Arthur. After spending two days at Edmonton, the members will take their spe-

cial train in the evening, and conclude the business of the third day in Calgary. Further information as to rates and special trips will be given in a future issue.

ONTARIO MEDICAL ASSOCIATION

As previously announced the next annual meeting of the Ontario Medical Association will be held in Toronto, May 21-22-23. We are informed by Dr. Clarkson, the General Secretary, and by Dr. Graham Chambers, Chairman of the Committee on Papers and Business that earnest efforts are being made in the interest of the meeting both from a social and educational standpoint.

It is the intention of the Committee on Papers to make the programme more clinical in character than has hitherto been the custom. The marked success of the two meetings of the Clinical Association of Surgeons of North America, the one held in Chicago in 1910, the other in Philadelphia in 1911, has largely influenced the officers of the Ontario Medical Association in reaching their conclusion.

The morning of the second day of the meeting will be devoted to a clinic in the building in which the Association will meet. On the morning of the third day clinics will be held in the various hospitals of the city.

Those who expect to attend the meeting are cordially invited to present cases at either of these clinics. Those who are not able to show a patient are requested to contribute clinical reports of interesting cases to be read at the afternoon or evening session.

CANADIAN PUBLIC HEALTH ASSOCIATION

It is expected that the Second Annual Meeting of the Canadian Public Health Association will be held in Toronto some time during the month of September, 1912.

The Officers are: Pres., Dr. C. A. Hodgetts, Ottawa; Vice-Pres., Dr. M. M. Seymour, Regina, and Dr. E. B. Fisher, Fredericton; Gen. Sec., Maj. Lorne Drum, Ottawa; Treas., Dr. G. D. Porter, Toronto; Executive Council, Dr. P. H. Bryce, Ottawa; Dr. F. Montizambert, Ottawa; Dr. J. D. Page, Quebec; Dr. Lachapelle, Montreal; Dr. Chas. Hastings, Toronto; J. Aird Murray, C.E., Toronto; Dr. Chas. Douglas, Quebec; Dr. Mackay, Saskatoon; Dr. Geo. T. Clark, C.E., Saskatoon; Dr. C. I. Fagan, Victoria, B.C.; Dr. G. E. Duncan, Vernon, B.C.; Col. Carleton Jones, M.R.C.S. (Eng.), Ottawa; Dr. Smith Walker, Halifax, N.S.; Dr. E. C. Stevens, Moncton, N.B.; Dr. G. G. Melvin, St. John, N.B.; Dr. H. G. Johnston, and Dr. Jas. Warburton, P.E.I.; Dr. T. H. Whitelaw, Calgary, Alta.

The local Committee of Arrangements is composed of: Dr. Chas. Hastings, Chairman; Mr. J. Aird Murray, C.E., Secretary; Dr. Duncan Anderson, Associate Secretary; Drs. G. D. Porter, Adam H. Wright, A. J. Harrington, J. W. S. McCullough, J. W. Coulter, J. A. Amyot, and Helen MacMurchy, with power to add to their numbers.

It is expected that large numbers will be added to this committee in order that it may include all the different classes of people whose work is concerned directly and indirectly with all sorts of matters pertaining to public health.

PENSIONS FOR THE AGED

It is thought by some that Canada should adopt an Old Age Pension scheme. Mr. Burnham, of Peterborough, and Mr. Nickle, of Kingston, brought this matter before the House of Commons at Ottawa, and introduced a resolution calling for the appointment of a committee to study the question and report to the House.

It has been pointed out by others that there are many reasons for opposing such a scheme. The *Trenton Courier* tells us that, in the County of Hastings, there is an excellent House of Refuge at Belleville, where the worthy poor have a comfortable home. In connection with this House of Refuge there is a large farm, which is made to supply much of the foodstuffs which are required for the inmates, and thus, able to work, they have health, exercise, and at the same time earn a portion of their living. Many other counties in Ontario have similar Houses of Refuge, and all are doing good work in a fairly economical way.

Sir Richard Cartwright is opposed to Old Age Pensions, and expresses the opinion that the worst enemies of the working classes were those who sought to pauperize or degrade them by making them the recipients of pensions they did not earn. He further thought that Canada should not make preparations to relieve the submerged tenth, but see that no submerged tenth exists in this country.

We shall not now discuss the subject, but we desire to express the hope that no Old Age Pension scheme will be considered necessary for this vigorous young country for many long years to come, as such a

scheme would certainly tend to pauperize the people, and is, without doubt, the most expensive plan by which aid can be given to the aged poor.

THE CANADIAN HOSPITAL ASSOCIATION

The next meeting of the Canadian Hospital Association will be held in the Parliament Buildings, Toronto, from April 4th to 6th, 1912. Dr. H. A. Boyce, Superintendent of the Kingston General Hospital, is President.

A.P.M.—NINTH CONGRESS

The ninth annual Congress of the Association Internationale de Perfectionnement Scientifique (A. P. M.), under the high patronage of the French Government, will take place from the 3rd to the 31st August, 1912, in the Balkans, in Turkey, and in Greece.

The Congress will be opened in Evian-les-Bains or Thonon-les-Bains (Lac de Genève), and will be continued in the following order: Venise (via Simplon), Trieste, Grottes d'Adelsberg, Agram, Belgrad, Descente du Danube, Passes de Kazan. Portes de Fer, Bucarest, Sofia, Constantinople, Mytilène, Smyrne, Athènes, Phalère, Eleusis, Corynthe, Olympie, Corfou, Bologne (via Brindisi). The last meeting will be held at Aix-les-Bains.

The colleagues wishing to present notices or other reports (Medecine et Chirurgie générales et spéciales et Sciences-annexes, Hygiène dans toutes ses branches, Prophylaxie, Assistance), are earnestly requested to write to this effect to the Head Office.

The programme of the Congress will be published in the January number of the review of this association. A copy of this special number will be posted registered on application on postal order value 1s. 4d.

For further particulars write enclosing international answer-stamp 2½d. to the President, Head Office A.P.M., 12 Rue François-Millet, Paris XVI. The General Secretary, Dr. Ghislain Houzel.

Personals

Dr. Robert N. Horton has been appointed one of the License Commissioners for Brockville.

Dr. George Millichamp, of Toronto, spent a portion of February at Clifton Springs, N.Y.

Dr. Murray McFarlane returned to his home in Toronto January 30th, after a visit to Palm Beach, Florida.

Mr. Morgan Jellett has been made a member of the well-known firm of Æmilius Jarvis & Co., bankers and brokers.

Dr. J. N. Mathieson, of St. Mary's, is spending a portion of the winter in Toronto. His present address is 194 Bloor Street West.

Dr. Henwood Harvey, of Cambridge, Eng., visited his relatives in Toronto during the month of January.

Dr. Wilfred Ecclestone (Tor. '09) took the double qualification of London, England, January 23rd.

Dr. W. R. White, formerly of Toronto, and now of Baltimore, visited his relatives here in the latter part of January.

Dr. John Silverthorn has been appointed an Associate Coroner for the County of York, and Dr. Paul Poisson, Associate Coroner for the County of Essex.

Dr. B. Hewson, who practiced for some years in Colborne, Ont., sold out his practice in November last, and since that time has been engaged in post-graduate work in New York.

Dr. J. Orlando Orr, of Toronto, has been appointed a member of the Board of Governors of the University of Toronto in the place of the Hon. W. T. White, resigned.

Dr. George Adami, Professor of Pathology in McGill University, Montreal since 1892, recently received a very enticing offer from the North-Western University, Illinois, but decided not to accept. McGill's many friends will be glad to know that Professor Adami will not leave Montreal.

Book Reviews.

Scientific Features of Modern Medicine. Columbia University Lectures. By Frederic S. Lee, Ph.D., Dalton Professor of Physiology, Columbia University. New York: The Columbia University Press. 1911. All rights reserved.

A series of lectures to laymen on scientific subjects have been published in this volume. While the physician will find nothing new in it, yet he may gather many instructive points which will be of help if he has himself to deliver lectures of a similar nature. The subjects discussed are Infection and Bodily Resistance to Disease, Cancer, Modern Surgery and Experimental Medicine. When so much is being done, as it is now, in taking the public into confidence on these subjects, such a book is instructive and timely.

A Handbook of the Diseases of the Eye and Their Treatment. By Sir Henry R. Swanzy, A.M., M.D., D.Sc., Past President of the Royal College of Surgeons in Ireland; Past President and Bowman Lecturer of the Ophthalmological Society of the United Kingdom; Surgeon to the Royal Victoria Eye and Ear Hospital, and Ophthalmic Surgeon to the Adelaide Hospital, Dublin. And Louis Werner, M.B., F.R.C.S.I., Sen. Mod. Univ. Dub., Ophthalmic Surgeon to the Mater Hospital; Assistant Surgeon to the Royal Victoria Eye and Ear Hospital; Professor of Ophthalmology, University College, Dublin. Tenth edition with illustrations. London: H. K. Lewis, 136 Gower Street, W.C. 1912.

This is one of the most concise and thorough text-books on the eye. In the tenth edition the work has been very carefully and extensively revised.

It is a valuable book alike for the ophthalmologist and student, and we can heartily recommend it to the busy practitioner on account of its conciseness and reliability.

The first chapters are taken up with the functional examination and the use of the ophthalmoscope. Diseases of the conjunctiva-cornea and sclera are thoroughly dealt with. A very valuable chapter is that devoted to diseases of the uveal tract (iris-ciliary body and choroid).

The subject of sympathetic inflammation is very well treated.

It contains very valuable information for all oculists and practitioners on this very important subject.

Glaucoma and its treatment is dealt with very plainly and concisely, as is the retina and its diseases.

Ocular disease and its relation to diseases of the brain and spinal cord forms a very instructive chapter with the amblyopias.

The orbital muscles and their derangements is exhaustively dealt with in a very interesting manner.

The section on operations on the eye and eyelids contains a fund of information and will well repay very careful study.

Arthritis, a Study of the Inflammatory Diseases of Joints. By Peter Daniel, F.R.C.S., Senior Surgeon Metropolitan Hospital; Surgeon to the Gordon Hospital; Assistant Surgeon, late Pathologist, Charing Cross Hospital. Edited by James Cantlie, M.A., M.B., C.M. Aberd., F.R.C.S., Eng., Surgeon Seamen's Hospital Society; Lecturer on Surgery, London School of Tropical Medicine. London: John Bale, Sons & Danielsson, Ltd., 83-91 Gt. Titchfield Street, Oxford Street W. 1911. All rights reserved.

This book forms a member of the Medico-Chirurgical Series and presents in a very readable manner the subject of arthritis. The differential diagnosis of the chronic inflammations of joints, about which no two authorities seem to agree is presented in such a way as to form a good working basis for the practitioner. The author has drawn freely from other writers for many of his statements, and has illustrated the book freely with excellent cuts, diagrams and skiagraphs. At the end of the book is a very complete chapter on the use of Bier's hyperæmic treatment as applied to joint conditions. Altogether the work will be found a very useful handbook on a somewhat difficult subject.

Obituary

Mrs. Howitt, wife of Henry Howitt, M.D., Guelph, Ont., died February 5th, aged 62.

ROBERT ASTLEY CORBETT, M.D.

Dr. R. A. Corbett, of Port Hope, Ont., died at Ocean Beach, Cal., January 27th, aged 75. The remains were brought to Port Hope and the funeral took place from the family residence, John Street, on Tuesday, 6th of February.

CARSON HENRY BRITTON, M.D.

We have to announce with very deep regret the death of Dr. C. H. Britton, of East Toronto, which occurred January 31st, after a prolonged illness of about one year.

Dr. Britton received his medical education in Toronto School of Medicine and graduated M.B., Toronto University, and M.D., Trinity University, 1885. Soon after graduating he settled in East Toronto, formerly known as East York, and practiced there up to the time of his last illness. He was one of our best types of a good all round general practitioner. He was very highly respected and greatly beloved by all his acquaintances, but especially by his patients.

SAMUEL HARRY WESTMAN

Dr. S. H. Westman died at his home, 341 Bloor Street West, Toronto, December 30th, 1911. As he had been ill for a long period the announcement of his death was not unexpected, and yet it caused among his friends a certain amount of shock and very deep grief.

He received his medical education in the Medical Faculty of the University of Toronto, and graduated from that institution in 1896. After practicing for a time in Toronto he went to the Old World, and did much post-graduate work, especially in London. He devoted his attention while abroad chiefly to surgery,

and passed part of the examinations for the fellowship of the Royal College of Surgeons. His failing health there prevented him from continuing his surgical studies.

He was a member of the Surgical Staff of the Toronto General Hospital, and was a Demonstrator of Clinical Surgery in the University of Toronto.

Sam Westman, as he is known to his friends, has gone, but will not be forgotten during the lifetime of his friends. He was one of the most likeable, or to speak more correctly, most loveable men in the medical profession in this part of Canada.

LORD LISTER

Lord Lister's many friends in Canada were deeply grieved when news came by cable, February 11th, that he was dead. He was born in Essex County in 1827, and was therefore 85 years of age. As a youth he lived in a good atmosphere with his father, who was a Quaker, and at the same time had a mind endowed with a great love of science. He received the degree of B.A. in 1852. During his student life he worked faithfully both in the laboratories and the hospital wards, being one of the first house surgeons under Sir John Eric Erichsen.

After graduating he went to Edinburgh, where he continued his researches in physiology and pathology. While in Edinburgh he became closely associated with Professor Syme. He was appointed Regius Professor of Surgery in the University of Glasgow in 1860, and did much of his work in connection with antiseptic surgery in the Royal Infirmary of that city. His work in Glasgow and Edinburgh made him famous, and in the latter part of 1876 he was induced to go to London to take a position on the staff of King's College Hospital.

At this important time in his career he encountered considerable opposition. Many of the surgeons of London endeavored to belittle his results so far as they were published. Many of those who criticized his methods had no clear conception of the principles underlying his system of treatment. The "spray" was unduly exalted to such an extent that its use was considered by many to be Listerism, while it was in reality only one, and that the least important feature of his treatment. As a matter of fact he discarded his spray apparatus in a few years. At the same time many of the Continential surgeons, especially those of Germany, understood Lister and his methods better than

the majority of his confreres in Great Britain. Some prominent English surgeons went so far as to say that he suppressed statistics, "because he had none that he would not be ashamed to produce." The following is an example of other unpleasant things insinuated: "The publication of isolated cases, however good proves nothing, whereas the withholding of the whole suggests much." These were the words of Mr. Brant, of London, and were endorsed by Mr. Savory, afterward Sir William Savory, who quoted them with approbation in his address on Surgery, delivered before the British Medical Association at the meeting in Cork, August, 1878.

Lister continued to work with earnest zeal, and gradually but surely gained ground until he finally overcame all opposition. His uniform kindness and courtesy towards his opponents did much to secure this happy condition of things. Many honors were conferred upon Lister both at home and abroad. The medical world was greatly pleased when he was elevated to the Peerage in 1897 on account of the great service he had rendered mankind through his work in aseptic and antiseptic surgery. In visiting countries outside of Great Britain he received many ovations. One of the most memorable was that which he received at the great International Medical Congress in Berlin, August, 1890. There were 7,000 persons in the Circus Renz at the opening ceremony. When Professor Virchow, attended by a brilliant company of ministers and other distinguished men, ascended the tribune, applause burst forth again and again as various celebrities came into view; but it was Lister who was met with the most prolonged applause. Again at the first general meeting, when he stood up to deliver his address on Antiseptic Surgery, he was greeted with applause so long continued that he had to wait some time before making himself heard.

Selections.

Some Toxic Effects of Salvarsan

Before the fifth German Congress of Neurologists, held last October in Frankfort, Professor Finger, of Vienna, delivered, apparently in the presence of Professor Ehrlich himself, an important address on the toxic effects of salvarsan. In his introductory remarks the Viennese syphilographer mentioned incidentally that as long as the preparation was not on the market he had not countenanced its use outside the hospital clinics, for he considered that its employment in private cases in these circumstances was unfair. After it had been placed on the market some unpleasant experiences had made Professor Finger hold his hand before advising its general use.

He considered that the only data from which conclusions should be drawn were those obtained by observation in a hospital, in a public way, where cases could be seen and followed up by several medical men, for it was easy in private practice for the sole observer to auto-suggestionize himself. Dr. Finger had treated over 500 patients with salvarsan, and with salvarsan only, in order to be able to judge the preparation on its merits, an end which could not be achieved if mercury and potassium iodide were also given. Everyone admitted the good symptomatic results obtained by means of salvarsan, but he desired to deal with the complications, especially those of the nervous system.

Latterly, following the lines laid down by Ehrlich, he had used salvarsan by the intravenous method only. Among the symptoms which might follow the injection, Professor Finger enumerated the following: rigors, fever with a temperature of 40° C. (104° F.) and upwards, general malaise, prostration, headache, dizziness, vomiting, colic and diarrhœa, jaundice, loss of appetite, rapid pulse, cardiac symptoms, dryness and irritation of the throat and pharynx, difficulty of breathing, psychic and motor restlessness, tremors of the knees, bladder troubles, severe sweating, conjunctivitis, salivation with salty taste in the mouth, urticaria, erythema, herpes zoster, temporary melanosis. In addition soon after, indeed in some cases immediately after the injection, symptoms such as the following were observed: œdema and cyanosis of the face, clouding of the mind, vomiting, diarrhœa, breathlessness, diaphragmatic cramps, tonic and clonic contractions of the muscles of the limbs, severe collapse. He considered that these various symptoms pointed to

an acute arsenical intoxication, and most observers were of the same opinion. He did not agree with the views of Neisser and Kuznitzky on this point, namely, that the symptoms were the result of the direct action of salvarsan on the spirochætes, that is, were due to a general specific reaction produced by the setting free of endotoxins through the destruction of a large number of the parasites. That view could not explain the fact that similar symptoms had been observed after the injection of salvarsan in non-syphilitics, as in psoriasis and leprosy for instance. Moreover, the *post-mortem* appearances agreed with the diagnosis of arsenical intoxication. Géronne and many others had established this point, and Professor Finger had himself had a fatal case in which the necropsy was done by Professor Weichselbaum of Vienna, who had come to the conclusion in his report that in the absence of any other discoverable cause death was due to acute arsenical intoxication. Nor did Finger accept the view of Wechselmann of Berlin, that the symptoms were due to micro-organisms in the saline solution employed. Finger said that the saline solution he employed was always freshly prepared and sterilized by the hospital pharmacist, and he had, moreover, ascertained that even before sterilization the saline solution had been found to be practically free from germs. Although both in his own clinic and in that of others in the Vienna General Hospital, intravenous injections of saline solution to the extent of a litre had frequently been carried out for various conditions, symptoms similar to those he had described had never been observed. Moreover, the same symptoms had occurred after intramuscular injections of salvarsan, so that the saline solution could have played no part in their production.

As to the very important matter of nerve involvement, Finger stated that out of his 500 cases nerve complications were observed 44 times (9 per cent), whereas in Herxheimer's 900 only 9 occurred (1 per cent.), in Weintraud's 1,500 only 13 (0.9 per cent.) and in Wechselmann's 2,800 only 10 (0.37 per cent.). But Zimmern has pointed out that only 125 of Herxheimer's 900 cases were kept under observation, and it was in these 125 cases that 9 instances of nerve trouble (7.5 per cent.) occurred. Géronne and Gutmann had stated that only 300 of Weintraud's 1,500 cases were under any continued observation, and out of these 300 cases 13 exhibited nerve symptoms (4.3 per cent.). Wechselmann himself admitted that he only saw a portion of his total patients again. Finger then reviewed in detail the cases of nerve complication he had observed, and concluded that the connexion with salvarsan could not, on the following grounds, be doubted:

1. The occurrence of the nerve troubles with typical regularity some six to eight weeks after the salvarsan treatment.

2. The frequency of these complications in patients treated with salvarsan as compared with the relative infrequency of such complications in patients either not treated at all or treated by means of mercury; in the thousands of cases of syphilis he has had under observation for two or three years after infection such nerve complications had been very rare. But in cases treated by salvarsan he had seen in a short period 44 cases of nerve complications in 500 cases treated by salvarsan. Benario had collected in medical literature 194 cases of nerve complication after salvarsan treatment, and 122 after mercurial treatment, but such statistics were of no value unless the total number of cases treated by the two methods was known, and though the total number of salvarsan cases might be known, the number of cases treated by mercury were not known.

Finger criticized Ehrlich's view that the nerve complications were due to the survival of spirochætes in bony canals, the spirochætes in the rest of the organism having been destroyed by the salvarsan. There was, he said, no proof of the complete sterilization of the rest of the organism; on the contrary, Finger found that in 12 out of his 44 cases of nerve trouble, widespread affection of the skin and mucous membranes was present at the time of the appearance of the nerve symptoms, or followed the latter. The Viennese professor adduced other objections to salvarsan, and concluded his paper by stating that, judging from his own statistics, the secondary stage, and especially the early secondary stage, was not a suitable period for the exhibition of salvarsan, 12 per cent. of his nerve complication cases occurring in the secondary stage, as against 4 per cent. in the primary and 2 per cent. in the tertiary stages.

On the other hand, whilst admitting that the increased number of complications observed recently after the use of salvarsan, as far as the auditory apparatus is concerned, do mean something new, Dr. Karl Beck, assistant in the ear, throat and nose clinic of Professor Kümmel in Heidelberg, points out that as to whether these are due to salvarsan or to syphilis is another matter. In any case he found that, whereas only one such instance of auditory complication has been observed during a period of five years in the ear clinic, five such cases had come under notice in the previous six months after salvarsan treatment. Dr. Beck thought he could clear up the matter by injecting salvarsan in suitable doses into the vein of the tail of white mice, and then, after a time, decapitating the animals and cutting sections of embedded

skull and contents. The results were negative. Dr. Beck admits, too, that such experiments on animals cannot afford conclusive evidence as to what happens in the human organism. There are differences which cannot be ignored. The fact remains that auditory complications in the Heidelberg clinic are out and away far more common since salvarsan has been used. This, at any rate, confirms the opinion expressed by Professor Finger of Vienna.—*British Medical Journal.*

Important New Experiments on Cancer

On December 20th Prof. v. Wassermann, the well-known medical scientist, introduced to the Medical Society of Berlin an account of certain experiments which he had undertaken in conjunction with Drs. Keisser and v. Hansemann on animals suffering from cancerous growths. The animals used for the purpose were mice, and, therefore, the experiments were not to be regarded as necessarily applying in their various results to the human subject, although they might be the means of indicating the direction in which a curative treatment for cancer might be expected.

The conception underlying the experiments was of a similar kind to that which was successful in the case of the now well-known remedy "salvarsan," that is to say, the introduction of a substance into the body, of a poisonous nature, which has a selective action on pathogenic organisms or diseased structures. In this way, arsenic employed by Ehrlich was modified as regards its chemical constitution to such an extent that it became specially attractive when introduced into the animal body to the micro-organisms of syphilis, and was possessed of but little attraction for the healthy tissues. In the case of cancer, Wassermann worked with the salts of selenium and tellurium, which are poisons, and their injection into the cancer growths was followed by the gradual softening and disappearance of the tumor. This, however, was not regarded as satisfactory, because in the case of carcinoma in man, the destructive agent must be applied by means of the circulation, and the introduction of the salts referred to by means of the blood stream in sufficient amount to destroy the cancerous growth likewise killed the animal. It was at this point that large numbers of experiments were made in order to obtain such a combination of the selenium salt as would impart to it a selective action on the cancerous morbid growth, and yet not injure the healthy tissues. Such was successfully discovered in eosin, which is a well-known dye used in research

EATON'S

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work. The combination of selenium with eosin when injected into the veins of a healthy mouse produced a pink coloration all over its body, while the same quantity injected into an animal possessing a cancerous tumor was followed by little or no coloration of the skin generally, while the tumor itself was very deeply stained pink. This proved that the cancerous cells had picked out the eosin-selenium, and had become saturated with it. The result was that after three injections softening of the tumors began, and in the course of three or four more the tumor had practically disappeared. It came out in the experiments that when the treatment was apparently insufficient the growths recurred, and further, that growths of a certain size only were amenable to the treatment. When the growths were very large, and softening occurred, death of the animal took place, which was supposed to be due to absorption of the tumor contents into the system. In the case of the smaller growths, after many months there was no recurrence. Dr. v. Hansemann, who had conducted the *post-mortem* examinations, stated that the result of the injections was to disintegrate the nuclei of the cancer cells. The cells thus killed were disposed of by the spleen chiefly, but when their number was excessive, and could not be dealt with by the spleen, death occurred. He also examined the normal cells in the various parts of the body, and found that they had been in no way affected by the remedy.

These experiments are of the very greatest interest and importance, and the profession will eagerly follow others in the same direction. The success which has already attended Ehrlich's remedy, naturally raises hopes for success in the case of cancer, and there is no reason to see why, if a selective antidote can be got, it might not quickly kill all the cancerous cells in the body and free the patient from the disease altogether.—*The Medical Magazine.*

Rest in Bed for Skin Cases

The unique suggestion that patients suffering with skin diseases, such as eczema, erythema, and the ordinary run of inflammatory lesions, be put to bed and kept there under treatment for varying lengths of time, is one of the most interesting features of a recently issued book, written by Dr. Jakob Justus, chief of the skin department of the Jewish Hospital of Budapest.

However, it must be confessed that many difficulties stand in the way of the general adoption of bed-treatment of skin

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cases, and notwithstanding that we are disposed to agree with Justus we fear that his plan is impracticable. In the first place, a large percentage of such diseases are in the persons of bread-winners whose needs are such that it is only under the most urgent circumstances that they can take to bed and remain there for any length of time. Then again, it would take an exceptionally convincing tongue to make plain the advantages of rest in bed for the average skin case. This novel idea, novel because of its difficulty of employment, is not likely to come into popular use, and we are afraid dermatologists must continue to treat their cases as of yore. Justus makes his suggestion very tempting when he tells us how extraordinarily effective certain modes of treatment, which are frequently useless in ambulatory cases become when the patients are put to bed. Furthermore, he declares that some few cases clean up in bed without any local treatment whatever.

Another idea to be found in the same book and which also will be just as difficult of application, is that patients, suffering with dermatic lesions, be prohibited from smoking. The author says that he has seen astonishing results follow the stopping of the weed, and that in itching diseases particularly, a marked abatement of the distressing irritation has been an early reward for the sacrifice. He even goes to the extreme of declaring that many obstinate cases of eczema and pruritus can be cured by abstinence from smoking, without resort to remedial means.—*American Journal of Dermatology.*

Noguchi's Cutaneous Luetin Reaction

Cohen (*Archives of Ophthalmology*) says that, working on theories borrowed by von Pirquet in the discovery of the cutaneous tuberculin reaction, Noguchi has employed a theoretically analogous method as a test for syphilis. This would naturally have been impossible but for Noguchi's recent discovery that spirochætes can be grown in pure cultures. The test emulsion, which Noguchi has named luetin, is an emulsion or extract of cultivated pure *Spirochætæ pallidæ* which have been killed by heat and then carbolized with one-half of one per cent. phenol. The control emulsion consists of the uninoculated culture media, prepared in the same way as the luetin media. The technique is simple; under aseptic precautions a drop of the control emulsion is injected into the skin of the inner side of one arm or forearm; a drop of the luetin emulsion at a corresponding place

"overconfidence frequently begets carelessness, and as Spring approaches with its semblance of balminess so with it come those cases of Chest, Bronchial and Inflammatory Throat affections as a result of exposure from rushing the season.

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in the skin of the other arm. Little or no reaction takes place in non-luetic cases, but when the person is syphilitic a series of changes takes place. In from six to twenty-four hours, as a rule, though perhaps not until after eight days, a distinct papule appears surrounded by a bluish red halo. As the papule grows larger the areola fades away. The papule may be circular or eliptical, is from five to twenty millimetres in diameter, and develops in the majority of cases a central area of suppuration, which ruptures a few days later. As the discharge of the seropurulent fluid occurs the contiguous epidermis becomes denuded. Epidermatization now begins and the affected skin becomes hypertrophic. This hypertrophy persists in cases in which the reaction was marked for at least five months. Smears and cultures made from the pus were found to be negative bacteriologically. Microscopical examination of sections of the hypertrophied area showed round cell infiltration. As a rule, there is no reaction at the site of the control inoculation in syphilitic persons, but in a small number of cases changes take place that resemble the positive reaction, except that the skin becomes simply discolored instead of hypertrophic. This pseudoreaction is usually exhibited by persons suffering from tertiary syphilis, and it is thought the peculiar pathological condition of the skin, in which there is an increased susceptibility to trauma, is present in these cases. Usually there is no constitutional reaction, but in two cases there was malaise on the day following the inoculation, slight elevation of the temperature, and mild gastrointestinal disturbances. Cohen has tried the test in sixty cases. In these the cutaneous reaction corresponded with both clinical evidence and Wassermann test in twenty-eight, with the clinical evidence alone in nine, with the Wassermann test alone in nine, and did not correspond with either the clinical evidence or the Wassermann test in fourteen.—*New York Medical Journal.*

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Miscellaneous

Prevalent Diseases

Each change of season brings with it its diseases seemingly peculiar to the time.

Summer with its intestinal disorders, sunburn, insect bites, ivy poisoning, etc.

Fall presents for the attention of the physician, its typhoid cases and winter and early spring, its regular quota of pneumonic, bronchial, throat and other chest conditions.

At this season, when pneumonia and bronchitis demand the call of the physician, literature presenting the experience of fellow practitioners, in the successful handling of these cases, would seem most apropos.

The Bloodless Phlebotomist for January reflects the experience of many physicians upon this timely subject.

Dr. Charles Buck, of Cincinnati presents his experience in handling cases of pneumonia, also relates some facts in the treatment of lumbago, which might also be considered as an affliction prominently manifesting itself at this season.

"Broncho-Pneumonia" with supportive as well as local treatment in all its details, is the subject of the paper of F. A. Kautz, also of Cincinnati.

Dr. E. Clinton Murray, of Houston, Texas, relates his experience and treatment in a case of pneumonia in an eighteen months old baby, and Dr. J. C. Klippinger, of Independence, Kansas, presents a "Different Technique in Pneumonia," which is decidedly original. In abstract his method is to apply the local dressing in a manner which gives the intercostal muscles a chance to functionate without restriction from bandages. This symposium is closed with a paper from Dr. W. A. Radue, of Union Hill, N.J., upon "Acute Pleurisy and a Successful Abortive Treatment."

Besides the papers referred to, upon the subject of chest and throat diseases, much additional information is given. The one in particular we would have you note is the "Rational Influence of Hot Applications" by that well-known therapeutist, Dr. Finley Ellingwood, of Chicago, Ill.

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There has just come to hand a brochure entitled "Some Rough Notes on Modern Diagnostic Methods," which deals with the more recent diagnostic tests, the examination of fæces, sputum, exudates, the opsonic index. Widal and Wassermann reactions are detailed in a clear and concise manner. The pamphlet is issued to the profession, by the manufacturers of Fellows' Compound Syrup of Hypophosphites, who will be pleased to send a copy to any one interested, on application to them, mentioning this journal.

A Distinctive Piece of Literature

"Here is something different." This is apt to be the first thought of the physician upon breaking the wrapper of Parke, Davis & Co.'s new brochure on bacterial vaccines and tuberculins. And the external appearance of the book is in no wise misleading. The "difference" applied to the printed page as well as to the handsome cover in artistically blended browns and gold. The brochure contains forty-eight pages, in addition to the cover, and thirteen full-page engravings in colors.

The work is divided into three parts or sections. Some of the subjects considered in the first section are: "What is the Difference Between Bacterial Vaccines (Bacterins), Serums and Toxins?" "How Are Bacterial Vaccines Prepared?" "Therapeutic Action of Bacterial Vaccines." "When Should Serums Be Used, and When Bacterial Vaccines?" The second section treats of the origin and nature of the bacterins, the relative merits of "stock" and "autogenous" vaccines, the opsonic index, and the best method of using the bacterins, together with a description of each vaccine, including references to preparation, therapeutics and dose. The third section is devoted to a consideration of the tuberculins, with dilution and dose tables, descriptions and illustrations of the various diagnostic tests, etc. Briefly stated, the booklet is a concise review of the essential facts relating to bacterial vaccine therapy, containing precisely what the seeker after this kind of information wants. It is not padded with clinical reports—in fact, it contains none. We understand that Parke, Davis & Co. will be pleased to send a copy of this unique and valuable brochure to any physician requesting it. Address them at Walkerville, Ont., specifying the "new booklet on bacterial vaccines," and mention this journal.

Differential Diagnosis (Epitomized), Part III, is the title of a brochure issued recently by The Arlington Chemical Company,

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of Yonkers, N.Y., manufacturers of liquid peptonoids. This number deals with diseases of the digestive and urinary systems, and contains some valuable tables of points in the differential diagnosis of these diseases. Insert also are plates depicting in colors the pathological features of diseases of these systems. The Arlington Chemical Company will be pleased to send a copy of this brochure to physicians on application.

Deaths from Salvarsan

Hallopeau and Gaucher, at the Paris Academy of Medicine, recently reported three more deaths from salvarsan, all occurring in young and healthy subjects (*Bull. de l'Acad. de Méd.*, October and November, 1911). In the case reported by Hallopeau, two intravenous injections of 0.3 and 0.4 gram were given with an interval of six days, the patient being a robust man of 35 with palmar and plantar syphilides. The first injection was borne well, but the second was followed by nausea and vomiting on the following day, convulsions and coma on the third, and death on the fourth day. This patient had been previously treated with mercury and hectine, the last injection of the latter (10cg.) being given about three months before salvarsan. The onset of symptoms so soon after the injection of salvarsan points to the latter as the cause of death. Hallopeau mentions similar cases published by Fischer, Hoffmann, and others, and asks whether other cases have occurred which have not been reported. He remarks that a drug which may cause the death of comparatively healthy subjects is contraindicated, and urges that salvarsan should be abandoned like atoxyl and arsacetin. He considers that hectine is equally efficacious and free from the dangers of salvarsan. The case reported by Gaucher occurred in Beurmann's clinic at the St. Louis Hospital, and concerned a healthy man of 19 with primary syphilis. Two intravenous injections of 0.6 gram were given with an interval of three days. The second injection was followed by vertigo, headache, and vomiting, with epigastric pain and rise of temperature. On the second day epileptiform convulsions occurred, soon followed by coma and death. The autopsy revealed acute nephritis, all other organs being healthy. Death was attributed to uræmia following acute nephritis due to arsenical poisoning. The third cause of death, in a young and healthy girl of 18, was reported by Ravant. Gaucher concludes that, however efficacious its action, salvarsan

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is a dangerous drug, which should only be used with extreme prudence, and should be reserved for cases in which mercury fails or is not tolerated, but such cases are extremely rare.—*British Medical Journal.*

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A COURSE ON INTERNAL MEDICINE (attendance limited to 25), from 5th to 30th AUGUST. This will include a series of Clinics upon Diseases of the various systems, with Practical Classes upon Applied Anatomy, Hæmatology, Bacteriology, and the Examination of the Heart, Urine and Digestive Products, Nervous System, and X-Ray Diagnosis.

A COURSE ON DISEASES AND EFFECTS OF CHILDREN (attendance limited to 25), from 15th to 27th JULY. This course, which will be suited for Medical Inspectors of school children, will include Medical and Surgical Clinics, and Special Clinics on Diseases of the Skin, Eye, Ear, Nose and Throat, Teeth, and Mental Defects; also, practice in Anthropometric methods.

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The Canadian Practitioner and Review

Vol. XXXVII. TORONTO, APRIL, 1912 No. 4

Original Communications

TREATMENT OF APPENDICITIS*

By Herbert A. Bruce, M.D., F.R.C.S. (Eng.).

Associate Professor of Clinical Surgery, University of Toronto; Surgeon to the Toronto General Hospital.

Mr. Hancock reported the first case of incision of an appendix abscess in England in 1848, and yet the disease, as we now know it, only commenced to be generally recognized about 1890, and in England even several years later than this surgeons constantly referred to disease of the appendix as typhlitis and perityphlitis, terms which have now become practically obsolete. During my term as House Surgeon in the Toronto General Hospital in 1892-3 I only recollect having seen one operation for appendicitis. And during three years in England, from 1894 to 1897, I saw but very few, most of which consisted simply in opening an appendiceal abscess, then spoken of as a perityphlitic abscess. How things have changed since then! Now operations occur daily for appendicitis in all the large hospitals.

There is no question that an operation is the only *cure* for appendicitis. The so-called medical treatment may give temporary relief in the mild and subacute forms of the disease, but these patients are liable at any time to a recurrence of the attack. They are living and will live in constant danger of a sudden explosion, with the development of a serious condition, perhaps at a time when it is impossible to have a satisfactory operation performed. In many of the apparently mild cases an abscess forms or serious symptoms deevlop later, which would have been prevented by an early operation.

*Read before the Ottawa Medical Society.

Before considering the treatment of appendicitis it is desirable to make a classification. Anatomically acute appendicitis is always one and the same disease, the different anatomical varieties merely representing various stages in development or special complications. On referring to the text-books one is overwhelmed by the long list of varieties of appendicitis given, and the usual classification has always seemed to me needlessly elaborate, and extremely confusing to students and young practitioners.

For the last ten or twelve years I have been in the habit of classifying the disease as follows:—

All cases of appendicitis are divided into two groups:—

1. The Catarrhal or Subacute.
2. The Acute.

Clinically this classification is quite sufficient, for in an acute case of appendicitis it is practically impossible for us to say positively what the pathological condition is. Under these circumstances I contend that it is much better not to have a clinical classification, as we can only guess at the exact pathological condition until the abdomen is opened.

We can subdivide the acute cases as follows:—

1. Simple Acute Appendicitis.
2. Acute Appendicitis, with:—
   - (*a*) Perforation.
   - (*b*) Gangrene of Appendix.
   - (*c*) Localized Abscess.
   - (*d*) Diffuse Septic Peritonitis.
   - (*e*) Acute Fulminating Type, in which the symptoms develop with extraordinary rapidity.

As gangrene supervenes very readily in the so-called fulminating appendicitis there is no time for adhesions to form and shut off the pus, and diffuse septic peritonitis therefore ensues within a few hours.

So far as the catarrhal or subacute form is concerned, we may say at once that an immediate operation is not necessary. Most of these cases will go on to recovery under non-operative treatment. The application of an ice-bag, together with abstinence from food for twenty-four hours, will usually effect a cure. But as in a large number of cases there will be a recurrence, and as there is no guarantee that the next attack will be of such a mild character, but may, on the contrary, be of a very severe type; or that the present attack may not become acute, endangering the patient's life unless an immediate operation is done,

and as there is practically no mortality in these cases in the hands of a competent surgeon, I would advise operation, feeling that the operative risk is considerably less than the risk which the patient is running of developing a severe form of the disease later, when it may be impossible to secure the immediate services of a surgeon.

Next, as to the treatment of the acute form of the disease. This may be summed up very briefly by saying: *Remove the appendix at the earliest possible moment.* There has been a great deal of discussion as to the most suitable time for operation, a very common teaching being that an operation should be undertaken within the first forty-eight hours, and if it is not undertaken within this period, then it should be delayed until a safer period, which is supposed to be at the expiration of several days. This has always seemed to me very erroneous teaching, and my experience most conclusively demonstrates its fallacy. I have seen a beginning diffuse peritonitis within six hours of the commencement of an attack of appendicitis. If a case of this sort is left undisturbed for even forty hours it will be in a much worse condition for operation than many other cases at the end of seventy-two hours.

I am quite convinced that no definite limit can be fixed, beyond which it is unsafe to interfere, but that every case must be judged on its own merits. I have operated on the second, on the third, on the fourth, on the fifth, on the sixth and on the seventh days with good results, and without ever having regretted interference. My only regret has been that an opportunity was not afforded of operating at an earlier period.

If, owing to conditions over which we have no control, we are not sufficiently fortunate to have an opportunity of operating within forty-eight hours, and the forty-ninth hour has arrived, it seems to me quite wrong to say that the operation should then be postponed for some days in the hope that it may be undertaken under more favorable conditions. This delay is presumably for the purpose of giving a chance for the localization of an abscess, which can then be opened and drained, or for the development of anti-bodies to increase the patient's resistance. There is, however, the serious difficulty in giving such advice that an abscess *may not form*, and the case may develop into one of diffuse septic peritonitis.

There is much uncertainty in nature's methods, and we cannot confidently rely upon nature to wall off the pus in this way. Further, as we know that by operation we can effectually wall

off with gauze, and prevent the extension of infection throughout the peritoneal cavity, it seems to me to be the safer and saner procedure.

Five years ago, when reading a paper on this subject before the British Medical Association, in referring to the proper time for operation, I said that "in all cases of acute appendicitis the operation should be undertaken at the earliest possible moment; and that I could not too strongly insist upon operation in all cases of acute appendicitis."

After a further experience of several hundred cases, which have come under my observation since that date, I can only repeat that I am more firmly established in this opinion than ever. If it should unfortunately happen that the surgeon is not called until the patient has been ill for two or three days I still believe that, unless there are some very strong reasons to the contrary, an operation should be done immediately. I fail to see any reason why a patient is not safer with a quick and carefully performed operation, consisting of the removal of his diseased appendix, with the establishment of drainage, than he would be in trusting to the uncertain methods of nature.

I know, as I have said before, that nature is doing something in the way of providing anti-bodies to destroy infection, but her beneficent work in this regard need not be interfered with if we make a quick incision to remove the source of infection and provide drainage. If the source of infection is removed and drainage provided there will be less work for nature to do in the way of fighting the infection. If early operation is adopted as a routine procedure many of the complications will be avoided, and also incidentally the difficulty of adhesions and the presence of pus.

Incision.—I think in most of the acute cases the best incision is that along the outer border of the rectus muscle, as it gives more freedom for dealing with adhesions or with an unusually placed appendix, as the incision can be readily enlarged upwards or downwards at will.

Sonnenburg, of Berlin, stated at the International Congress of Medicine, held at Budapest in 1909, that each early operation for appendicitis must assume the character of an extensive laparotomy, with which opinion I am entirely at variance.

A small incision, with very little handling of the contents of the peritoneal cavity, is of the greatest importance, and anything further than this, far from being beneficial, is absolutely harmful. He also claims that it is unwise to operate after forty-

eight hours, and if he practises this extensive operation I think there is some justification for the position he takes.

I have very frequently used the gridiron incision, and nearly always in early acute cases, because it leaves a strong abdominal wall afterwards, and one can drain through such an incision for some days without any risk of subsequent hernia. Whereas with the so-called Battle incision, or right rectus incision, with drainage, one is practically certain to have a hernia, which, of course, necessitates a second operation.

In interval cases I prefer the gridiron incision, as in ordinary cases it gives all the room that one wishes, and leaves a strong abdominal wall. If after making such an incision it is found impossible to deal satisfactorily with the appendix on account of adhesions, or for any other reason, one can get more room by making an incision through the sheath of the rectus, along its outer border. This incision is then as easily closed as the primary incision through the rectus, and gives a strong wall.

Method of Removing the Appendix Itself.—I am in the habit of using a clamp on the base of the appendix, strong enough to leave the compressed portion in the form of a ribbon, the mucous membrane being squeezed to either side. Then with a purse string of linen or silk around the base of the appendix this ribbon-like portion can be cut across, and the stump invaginated into the caecum. It is not necessary to ligature the stump of the appendix, or to touch it with pure carbolic or with the thermo-cautery. I usually put a second purse string outside the first one, for if there is trouble with gaseous distension of the caecum there would be some slight risk of the first suture giving way. The mesentery of the appendix, if it is not too wide, can be tied with one ligature of fine silk or catgut. Then the stump of the mesentery is sutured to the caecum by a single suture, in such a way as to cover over the site of the invaginated appendix. The peritoneum is closed with a double suture of No. 1 catgut, which then approximates the muscle, taking care to draw it together loosely, and afterwards closes the external oblique aponeurosis. The skin and fat are closed by two or three silkworm gut sutures, fine horsehair being used to effect accurate approximation of the skin edge.

It is important that there should be no unnecessary handling of the intestines nor the application of irritating antiseptic solutions to the surface of the peritoneum. Many inexperienced surgeons attempt to do too much at an appendix operation, and this is especially true of the cases of perforation, and of those

with more or less limited abscess formation. Further, it is desirable as far as possible not to bring the intestines outside the abdomen. The appendix can be removed by bringing the caecum to the surface.

In an operation done in the quiescent stage the patient should be able to sit up at the end of a week, be out of bed the day after, and leave the hospital on the tenth day. If he has a long and fatiguing journey from the hospital it may be wise to detain him for two or three days longer. In these simple interval operations I think it very desirable to get the patient up as early as possible, and since adopting this course patients have made a much more speedy convalescence, and been able to resume work much earlier than formerly. The longer a patient is kept in bed the longer will it take him to get back again to his normal condition. Further, the shorter stay in bed diminishes the likelihood of a phlebitis developing.

Acute Cases.—After opening the peritoneum one should search very carefully for the appendix, and if a lump is felt, before disturbing it the general peritoneal cavity should be protected by a strip of narrow gauze. This will prevent the pus being disseminated if one should suddenly open into an abscess.

There are two varieties of local abscess met with in connection with the appendix. The first of these may be called anterior, and can usually be opened without getting into the peritoneal cavity. The second is posterior, and may be of two forms, either (*a*) lying in front of the appendix, or (*b*) situated behind the caecum. After opening the abscess the question will arise whether an attempt should be made to remove the appendix. In many of these cases there will be limiting adhesions shutting off the general peritoneal cavity. The answer to this question will depend upon the skill of the surgeon. A competent surgeon will almost invariably be able to remove the appendix without breaking through the limiting adhesions, and under these circumstances the appendix should always be removed. If the operator is a beginner, or not possessed of much skill in this work, it will be much safer for his patient if he contents himself with simple evacuation of the abscess and the provision of drainage. If drainage alone has been provided without removal of the appendix, and the cavity closes at the end of some weeks, the question will arise as to whether one should then do a second operation, or whether the patient should be allowed to go home and run the risk of having another attack. My own opinion is that in every case of this sort a second operation should be done before the patient leaves the

hospital, and the appendix removed. In a large number of cases there will be recurrence of the disease if this is not done. I have personally met with several cases in which there have been three or more recurrences of abscess formation and quite serious illnesses where the appendix was not removed. So that practically in all operations in acute appendicitis I am in the habit of removing the appendix, and have only failed to do so in about one per cent. of cases, in which it was thought inadvisable, on account of the serious condition of the patient, or the local condition.

In some cases the appendix is so soft and friable, as well as the caecum surrounding its base, that after its removal it is found difficult to get the sutures in the caecum to hold. Under these circumstances drainage should always be provided.

In a case in which there is a local abscess round the appendix this can be dealt with after exposure by mopping out, and no attempt should be made to flush it out with salt solution, owing to the risk of thus conveying infection to other parts of the abdominal cavity.

Treatment of Complications.

Diffuse Septic Peritonitis.—Formerly many surgeons advocated flushing the abdominal cavity with salt solution in all forms of perforative peritonitis, and some have even gone so far as to recommend "evisceration," with the object of permitting of more thorough cleansing. About twelve years ago the mortality of perforation of any abdominal viscus was simply appalling, but more recently perforations of the stomach have been successfully treated, chiefly as a result of the pioneer work of Mayo Robson and Moynihan. Flushing the abdominal cavity, and subsequent closure of the abdominal incision without drainage, gave excellent results in cases of gastric perforation, but has been a failure in so far as peritonitis following appendicitis is concerned.

For several years now my practice has been to open the abdomen, remove the gangrenous or perforated appendix, and pass large cigarette drains towards the pelvis and up to the right kidney pouch, and then make a small suprapubic incision, through which a rubber and a cigarette drain are passed to the bottom of the pelvis. In the female I have occasionally made a vaginal incision, and drawn the tube out through the vagina, thus affording excellent drainage. The split rubber tube is removed at the end of the second day, and the cigarette drain on the third or fourth day.

Toxins are responsible for tympanites. They act on the vasomotors in the splanchnic region, paralyzing them, and causing dilatation of the abdominal vessels and retention of most of the blood in the abdomen.

Saline infusion is of great importance in the treatment of diffuse peritonitis, as it stimulates the heart, and forces along the blood stagnating in the splanchnic region.

A saline infusion should be given before operation as a preventive measure, as otherwise the opening of the abdomen removes the pressure from the vessels in the splanchnic region, thus allowing them to absorb the remainder of the blood which has been keeping the patient alive, and resulting in peritoneal collapse. Collapse can be avoided in practically every case by intravenous infusion of one and a half to two pints of saline solution, with or without seven drops of adrenalin.

The treatment of diffuse peritonitis due to appendicitis may be very briefly summed up as follows:—

1. Remove the appendix.
2. Provide drainage.
3. Get the patient back to bed as quickly as possible.
4. Put him in the Fowler position.
5. Give continuous saline by the rectum.

In addition it is well in most of these cases to wash out the stomach while the patient is on the operating table, and to withhold all nourishment by the mouth for at least thirty-six hours. After this time albumin water may be given, and gradually other fluids added. The bowels should be opened at the end of the second day by a 1, 2, 3 enema, *i.e.*, an enema consisting of 1 oz. glycerine, 2 ozs. of Epsom salts and 3 ozs. water.

If there is a tendency to distension one-fiftieth of a grain of physostigmin may be given every three or four hours. On the third day, if the bowels do not move with the enema, it should be repeated every two or three hours until a movement is obtained; half an ounce of turpentine may be added to the third enema if distension is considerable.

The great danger in these cases is from paralytic ileus due to sepsis. The suprapubic incision for pelvic drainage in all these cases is most important, as even in the early days of septic peritonitis I have frequently found pus in the pelvis when it was not suspected, and in examining the pelvis one will be able to remove kinks and adhesions, which are sometimes present, and thus avoid the occurrence of intestinal obstruction.

Subphrenic Abscess.—If a patient has been going on well for ten days or two weeks, and then suddenly has a rise of tem-

perature of three or four degrees, with increased pulse rate, and complains of some soreness high up in his right side, perhaps with a chill, one should suspect the development of a subphrenic abscess. If the liver is found displaced downwards, and the side bulges, with tenderness on pressure over the liver, one can be pretty sure that this has occurred. It should be recognized early and evacuated. The best technique for the treatment of subphrenic abscess is that recommended by Elsberg. About two inches of the ninth and tenth ribs are resected between the scapular and anterior axillary lines. The reflection of the pleura usually lies in the centre of the wound, provided the thoracic cavity has not been carried downward by extensive effusion or upward by adhesions. Hence, when desirable, the pleura may be avoided altogether, the abscess being opened below it, while again it may be conveniently drained through the upper portion of the wound and the abscess through the lower. Practically, however, the incision must often be made directly through the free pleural cavity, but the danger is much lessened in the majority of cases by the close application of the visceral membrane against the parietal, especially if the liver is pressed firmly upwards. The surfaces of the pleura are sewn together with a running "back-stitch," reinforcing the suture line with gauze. Operating in two stages is generally unnecessary, although in exceptional cases it may be advisable. The half sitting position diminishes the risk of the occurrence of subdiaphragmatic and pulmonary complications after operation. I have operated upon a considerable number of cases of subphrenic abscess due to appendicitis with recovery. I have also had to drain the pleura on account of extension of pus into this sac.

Faecal Fistula.—In many cases of gangrenous appendicitis, in which rubber drainage tubes are used, a fæcal fistula will develop. As a rule this will heal spontaneously in the course of a few weeks. Occasionally, however, a fæcal fistula will persist and require a second operation.

There is nothing special in the operation. The sinus leading down to the opening in the bowel is dissected out, and with a few Lembert sutures the opening is closed. I might here give a word of caution in regard to the use of rubber drainage tubes. If left in for some days they are very likely to ulcerate into the bowel and give rise to a fæcal fistula. I have almost entirely given up using rubber drainage tubes on this account, and use instead the so-called cigarette drain, which consists of a piece of gauze rolled into soft green protective, which is perforated.

When there is a great deal of pus in the pelvis a large rubber drainage tube, which is split and has a strip of gauze through it, can be used, but should be removed at the end of twenty-four or thirty-six hours, and then replaced by a cigarette drain.

I have recently had a case which illustrates the terribly injurious effects of the use of rubber tubes. This patient was operated on for the removal of an interval appendix, and rubber drainage tubes put in. Just why they were used I am at a loss to know, and presume the operator feared there might be some flaw in the technique. They were left in for a week. A little later a fæcal fistula developed, which persisted for over six months, with much anæmia, loss of weight and debility, causing her physician to think that her constitutional condition was preventing healing. She was sent to California for some months, and subsequently came under my care. At the operation I found a large opening (about 2 in. x 1 in.) in the small intestine, and at another spot the intestine cut through, the ends being separated by half an inch. I did an end to end anastomosis of the latter, and succeeded in closing the former. She was in very poor condition, having had from time to time hæmorrhages from the mucous vessels into the bowel at the point of perforation. After an illness of some months she eventually recovered.

Another case was one of a similar character, in which the cæcum and a few inches of the ascending colon sloughed out, leaving an artificial anus. In this case I had to do an ileo-colic anastomosis and remove the balance of the cæcum and some of the ascending colon. He eventually also recovered.

It is safer to drain in cases in which the effusion is seropurulent or sanious, and of course in all cases in which it is purulent. I am convinced that it is a mistake to tightly close the abdomen in many cases, for unless resistance is good peritonitis may continue to spread, or cellulitis of the abdominal wall may develop and terminate fatally.

Some surgeons make a statement that it is impossible to drain the peritoneal cavity, but this is quite absurd, as I have constantly seen a very large amount of fluid escape during the first forty-eight hours in cases of suppurative peritonitis.

The most effectual way of preventing adhesions is to operate early, as drainage will then be unnecessary. If drainage is requisite, the lightest form of drainage, such as that provided by the so-called cigarette drain, should be employed, and then only for a limited period.

Intestinal Obstruction.—Intestinal obstruction and sepsis

form the great majority of post-operative complications. As regards the frequency of obstruction the proportion varies from 1 to 10 per cent., according to the skill of the operator.

There are two forms in which intestinal obstruction may occur, viz., the paralytic ileus and the mechanical ileus. The first is the more serious, and is a terrible bugbear to surgeons. So little can be done, the bowels becoming more and more distended, with increasing paralysis of their walls, due to the poisonous action of toxins. Purgative enemas should be repeated every two or three hours, as mentioned above, the best of these being the 1, 2 and 3, together with physostigmin (a fiftieth of a grain every three or four hours) and strychnine; but in spite of this treatment the ileus will often continue. If such is the case we should not delay too long before opening the wound, drawing out the first distended loop of bowel, opening it, and sewing in a Paul's tube. This will be effective in a few cases, but my experience with it has not been very encouraging.

Septic obstruction may be guarded against by:—

1. Rapid removal of the appendix.
2. Drainage of the inflamed area and of the pelvis.
3. Fowler's position.
4. Rectal protoclysis.
5. Intestinal rest, secured by withholding food and drugs by the mouth for thirty-six to forty-eight hours.
6. Physostigmin, as recommended above, seems to assist by improving the tone of the intestinal wall.

If paralytic ileus continues gastric lavage should be done as often as is necessary, and in rare cases enterostomy may be requisite for the evacuation of gas and liquid fæces. Peristalsis of the large intestine is induced by low enemata; if these fail, by high enemata; and if these are also ineffectual, by rectal lavage. Food and drink are absolutely withheld as long as vomiting persists.

In the case of mechanical ileus one should act very promptly, and care should be taken to recognize this condition as early as possible. If it is found impossible to get a movement of the bowels, and one is reasonably sure that the obstruction is due to mechanical causes, the patient should be immediately subjected to a second operation. The type of case which is most liable to this complication would appear to be one in which the peritoneal cavity is free from adhesions, thus permitting of free intestinal movements, and a few adhesions form between the site of the appendix and the adjacent loops of small intestine; or it may of course occur in other situations, particularly the pelvis.

The wound should be re-opened and the cause of the obstruction sought for. I have frequently been able to remove this, with recovery of the patient. My attention was especially directed to this subject several years ago by having a couple of cases die from obstruction several days after operation for diffuse septic peritonitis, and when they were apparently recovering. A prompt operation in these cases would have undoubtedly saved them, but they were in the country, and died without a second operation.

Septic Pylephlebitis, with Multiple Abscess in Liver.

This occurs once in about 250 cases, and as far as I am aware is invariably fatal. I know of no treatment that is of any avail in this condition, although open air treatment has been recommended.

The presence of a diseased appendix may cause the spread of infection by way of the venous channels, resulting in portal pyæmia, septicæmia or pulmonary complications. The appendix should be removed whenever possible, and if not too long delayed this complication will be prevented. I am absolutely certain that the mortality of the disease is greatly reduced when this is done.

Pregnancy.—Appendicitis complicating pregnancy should be dealt with in precisely the same manner as if pregnancy were not present, although it undoubtedly adds to the danger. I have operated upon a number of such cases without labor having been induced. In one case labor came on without ill effects, but in another—of septic peritonitis—death occurred from puerperal sepsis.

Empyema and Pulmonary Complications.—As regards empyema and pulmonary complications, they are practically always due to emboli. The presence of a suppurating appendix exposes the patient to a constant risk of general pyæmia.

Shock.—In the case of shock, according to Crile, no advantage will be gained from the use of strychnine. He states that his experience indicates that it is the surest way of inducing shock. However, I have used it in many cases with apparent benefit. Subcutaneous injection of pituitary extract will raise the blood pressure for several hours, and should be beneficial.

Death will occasionally occur, more especially in children, when the patient seems likely to recover, and is apparently due to profound intoxication. In some cases it appears to be related to delayed intoxication by chloroform, children being particularly susceptible to the action of this poison.

In order to avoid such accidents anæsthesia should be reduced to a minimum. Local or spinal anæsthesia may sometimes be employed in adults who are already suffering severely from shock, and ether should be given to children, and never chloroform.

Of 1,200 cases which I have operated upon, 800 were acute and 400 chronic. I have only been able to make a careful analysis of those operated upon since 1904, and am therefore giving the mortality rate only for that period, together with a brief account of the fatal cases and causes of death.

Both sexes were almost equally affected, the proportion being 2½ males to 2 females. In the acute cases the ages varied from 1½ to 95 years, the average age being 25¾ years. In the chronic cases the ages varied from 4 to 69 years, the average age being 30 years.

First Symptom.—As regards the acute cases, pain was the first symptom complained of in 97 per cent.; in 2½ per cent. the first symptom was nausea or vomiting, and ½ per cent. the history was indefinite in this respect. In 192 cases pain was first felt in the right iliac fossa; in 148 it was in the first place diffused over the whole abdomen; in 44 cases it was referred to the epigastrium; in 21 cases to the umbilicus, whilst in 5 cases only was it first felt directly over McBurney's point. In 7 cases the pain was at first referred to the left side; in 4 it was first felt in the back; in one case over the liver, and in one in the calf of the right leg.

In rather less than half the cases tenderness was definitely determined over McBurney's point; in 85 per cent. of the cases there was either nausea or vomiting; in 55 per cent. both nausea and vomiting, and in 30 per cent. only nausea. There was rigidity of the right rectus muscle in 95 per cent. of the cases; in 2 cases there was rigidity only of the left rectus muscle, and in 66 cases rigidity of both recti could be made out. In 63 per cent. of the cases a mass could be felt in the right iliac region.

Condition of Appendix.—In 25 per cent. of the cases the appendix was gangrenous, and in 30 per cent. it was perforated. In 50 per cent. of the cases the appendix contained a fæcal concretion, seven of such concretions being present in one case, and five in another.

Appendiceal abscess occurred in 82 of the acute cases.

Intestinal obstruction occurred in 19 cases, four of which recovered, 3 of these being due to intestinal paresis, and 1 to mechanical obstruction.

There were 7 cases of fæcal fistula, the fistula closing in every instance without a second operation.

Phlebitis was present in 4 cases, in one associated with synovitis. Pneumonia occurred in 2 cases, one being fatal. Bilateral pleurisy occurred in one case. Diabetes was present in one fatal case and subphrenic abscess occurred in 3 cases.

As regards the organism found in the cases of diffuse peritonitis, the colon bacillus was present in about half the cases, the staphylococcus in 25 per cent., the streptococcus in 15 per cent., and a mixed infection in 10 per cent.

Number of Attacks.—In the acute cases the largest number was 16 attacks in one individual case. In two cases there were 12 attacks each; in two cases 10 attacks each; in five cases 8 attacks each; in two cases 7 attacks each; in seven cases 6 attacks each; in twelve cases 5 attacks each; in thirty-one cases 4 attacks each; in forty-one cases 3 attacks each; in sixty-four cases 2 attacks each, and in the remaining cases 1 attack each.

In the chronic cases the largest number was 24 attacks in one individual case; in seven cases there were 12 attacks each; in seven cases 10 attacks each; in nine cases 8 attacks each; in two cases 7 attacks each; in seven cases 6 attacks each; in eight cases 5 attacks each; in nineteen cases 4 attacks each; in twenty-two cases 3 attacks each; in thirty-two cases 2 attacks each; in sixteen cases 1 attack each. In the remaining cases there had been no acute attack.

Interval between Beginning of Last Attack and Operation.—The time between the onset of the last attack and the operation varied from three hours to three months.

Temperature and Pulse.—Of the 500 acute cases operated upon since 1904 the temperature was up to or exceeded 100 deg. in 203 cases. In 100 of these it was under 101 deg., in 55 between 101 and 102 deg., in 35 between 102 and 103 deg., and in 13 between 103 and 104½ deg. In the remaining cases the temperature did not reach 100 deg., and in a number of them it was only 99 deg.

In the cases in which the temperature was 100 deg. or more, the pulse varied from 100 to 180. In those in which it was about 100 deg., the pulse rate varied from 86 to 134. In 3 of these it was between 122 and 126, and in one case 134. In the 297 cases, in which the temperature was under 100 deg., the pulse rate varied from 80 to 90. In one case, in which the temperature was just below 101 deg., the pulse rate was 180; in another case 148. With a temperature between 101 and 102 deg., the pulse rate varied from 100 to 144. In a case in which

the temperature was 104 deg., the pulse rate was 100, and in a case in which the temperature was 104.4 deg., the pulse rate was 118.

Mortality.—In 1905 I operated upon 46 acute cases, with 7 deaths. The causes of death in these cases were briefly as follows:—

Case 1.—Man, aged 21. Moribund when operated upon. He had been ill for six days with abdominal pain, fever and vomiting. The abdomen was full of thick pus, the intestines greatly distended and in places gangrenous. Death occurred on the day of operation.

Case 2.—Woman, aged 38. Acute gangrenous and perforated appendix and acute diffuse septic peritonitis, complicated by six weeks' pregnancy, abortion two days after operation. Death two days later from sepsis.

Case 3.—Child, aged 6. Hippocratic facies; small weak pulse of 160. Great distension of abdomen, with diffuse peritonitis and gangrene of appendix. Death on the day after operation. The pus gave a pure culture of the staphylococcus.

Case 4.—Man, aged 30. Ill five days. When seen he was suffering from intestinal obstruction, with great distension of abdomen and almost constant vomiting. No relief had followed large doses of purgatives. The abdomen was full of pus. The obstruction was due to a piece of omentum, which was adherent to the appendix, and strangulated a portion of the small intestine. He succumbed six hours after operation.

Case 5.—Man, aged 19, who had been ill for eight days. Gangrenous appendicitis and diffuse septic peritonitis. Death from intestinal obstruction, due to paresis of the bowel, two days after operation.

Case 6.—Boy, aged 8. Ill four days. Gangrenous appendix and diffuse septic peritonitis. Death two days after operation from intestinal obstruction, due to paresis of the bowel.

Case 7.—Man, aged 22. Ill for twenty hours. Great abdominal distension and rigidity, with a temperature of 99½ deg. and a pulse rate of 100. The night before operation pain was so severe that only slight relief resulted from the administration of 1½ grains of morphia by the mouth. There was diffuse septic peritonitis, with gangrene of the appendix and nearly half the omentum. Death two days after operation from intestinal paresis.

In all these cases of diffuse peritonitis the abdomen was flushed out with hot salt solution, and the patient put to bed in the recumbent position.

In 1906, 57 acute cases were operated upon, with 2 deaths. The causes of death were briefly as follows:—

Case 1.—Boy, aged 17. Gangrenous perforated appendix, with diffuse septic peritonitis. Ill four days. Treatment by suprapubic drainage, continuous rectal saline and Fowler position. Enterostomy was performed for intestinal obstruction, which supervened four days after operation, but death occurred two days later.

Case 2.—Woman, aged 37. Death from pneumonia eighteen days after operation.

In 1907, 66 acute cases were operated upon, with 7 deaths. The causes of death were briefly as follows:—

Case 1.—Man, aged 52. Death from diabetes of many years' standing. Ill two days with acute appendicitis. Appendix gangrenous, with a considerable amount of pus, only slightly walled off, in the general peritoneal cavity. Coma supervened five days later, with death two weeks after operation.

Case 2.—Man, aged 34. Gangrenous perforated appendix, with diffuse septic peritonitis, complicated by cholecystitis. Ill three days. General septicæmia developed twelve days after operation, with death four days later.

Case 3.—Man, aged 22. Perforated appendix, with diffuse septic peritonitis. Great abdominal distension. Death eleven days after operation from general septicæmia.

Case 4.—Woman, aged 30. Had strained herself seven weeks previously, and had since suffered from abdominal pain, vomiting and distension. Temperature 100 deg., pulse 124. The appendix was included in a large mass containing pus and adherent to intestines and omentum. Death eight days later from intestinal obstruction.

Case 5.—Man, aged 21. Ill eight days. Perforated appendix, with diffuse septic peritonitis and intestinal obstruction from septic paresis of the bowel. The abdomen was enormously distended, and he was almost moribund. Death shortly after operation.

Case 6.—Boy, aged 14. Ill two weeks. Gangrenous and perforated appendix and diffuse peritonitis, complicated by cholecystitis. After operation the temperature rose to 103 deg., and cholecystotomy was performed, but he died from septicæmia three days later.

Case 7.—Woman, aged 29. Ill forty-eight hours. Gangrenous and perforated appendix, with diffuse septic periton-

itis. Temperature 101.6 deg., pulse 112. Treatment by continuous rectal saline and Fowler position. Intestinal obstruction supervened nineteen days after operation, and was relieved, but she died twenty-four hours later.

In 1908, 48 acute cases were operated upon, with 4 deaths. The causes of death were briefly as follows:—

Case 1.—Boy, aged 16. Ill seven days. Perforated appendix, with diffuse septic peritonitis. Death two days after operation from intestinal obstruction, due to septic paresis of the bowel.

Case 2.—Girl, aged 16. Ill seven days. Gangrenous appendix, with diffuse septic peritonitis. Intestinal obstruction developed six days after appendectomy. It was relieved by operation, but she died two days later.

Case 3.—Boy, aged 16. Ill four days, and in a moribund condition. Diffuse septic peritonitis, with a temperature of 102 deg. and pulse rate of 138. Death from intense toxæmia two days after operation.

Case 4.—Man, aged 21. Ill five days. Diffuse septic peritonitis, with profound toxæmia, due to a large abscess behind liver. Death from septicæmia eleven days after operation.

In 1909 there were 46 acute cases, with 2 deaths, the causes of death being as follows:—

Case 1.—Man, aged 41. Ill four days, and almost moribund. Gangrenous and perforated appendix, diffuse septic peritonitis and intestinal obstruction. Temperature 100.6 deg., pulse 104. Death a few hours after operation from profound toxæmia and intestinal obstruction.

Case 2.—Boy, aged 19. Perforated appendix, with diffuse septic peritonitis. Intestinal obstruction developed nine days later, but a second operation was not allowed, and death resulted in two days.

In 1910 there were 100 acute cases, with 2 deaths. The following is a brief account of the fatal cases:—

Case 1.—Woman, aged 33. Ill four days. Gangrenous appendix, with diffuse septic peritonitis, due to bacillus coli. Intestinal obstruction developed four days after operation, but the friends of the patient did not consent to operation until twenty-four hours later, when it was too late to be of any use.

Case 2.—Man, aged 23. Ill twenty-four hours. Gangrenous and perforated appendix, with diffuse septic peritonitis.

Intestinal obstruction four days after operation. A second operation was not permitted, and he died two days later.

In 1911 there were 94 acute cases, with 2 deaths. The causes of death were briefly as follows:—

Case 1.—Woman, aged 46. Gangrenous appendix, with diffuse septic peritonitis, and intestinal obstruction, due to septic paresis. A second operation was performed for relief of obstruction, but she died a few hours later. It was clearly a neglected case, and hopeless from the beginning.

Case 2.—Man, aged 54. Ill seven days. Gangrenous and perforated appendix, with diffuse septic peritonitis and profound toxæmia. Temperature 101 deg., pulse rate 104. He had suffered from gangrenous phlegmonous cellulitis, and although drainage was provided and a stimulating plan of treatment carried out he succumbed two weeks after operation from septicæmia.

As will be seen from the above, in 15 cases death was due to intestinal obstruction, in 9 cases resulting fom paresis of the bowel, and in 6 cases due to mechanical obstruction from adhesions. In 6 cases it was due to general septicæmia; in 1 to pneumonia; in 1 case to general sepsis, following pregnancy and abortion, and in 1 to diabetic coma. In 3 cases the patient was practically moribund when operated upon.

Of the 26 deaths 16 occurred during the first three years (1904-1907), during which period 169 acute cases were operated upon, representing a mortality of 9.4 per cent. In all these cases, with two exceptions, in which the patients were placed in the Fowler position, diffuse peritonitis was treated by flushing out the abdomen with warm saline solution, the patient being kept in the recumbent position.

During the last four years, from 1907 to 1911, I operated upon 288 cases, with 10 deaths, or a mortality of 3.4 per cent. During this more recent period diffuse peritonitis was invariably treated by suprapubic drainage, continuous rectal saline and the Fowler position.

Of the 26 fatal cases 4 only were operated upon within forty-eight hours after the onset of the attack. Of these 4 cases, in 3 death was due to intestinal obstruction, and in the fourth to the supervention of coma five days after the operation in a patient who had suffered from diabetes of many years' standing. Of the deaths due to intestinal obstruction, in 1 case the patient had been ill for twenty hours, the symptoms being very severe

and rapid in development, and death occurring two days after operation. In another case the patient was operated on forty-eight hours after the onset of the attack, and the intestinal obstruction, which caused the fatal result, did not supervene until nineteen days after the operation. In the third case the patient had been ill for twenty-four hours. An operation for the relief of the obstruction was not allowed, and death occurred two days after its development.

In the chronic cases, and those operated upon in the interval, there was no mortality.

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NATIONAL AND PROVINCIAL RESPONSIBILITY IN THE TUBERCULOSIS CRUSADE*

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It is not my purpose to set before you any facts or figures relating to the prevalence of tuberculosis in Canada. They have been presented so clearly by Dr. Reid, your esteemed Provincial Health Officer, and by the Canadian Association, that we accept the fact that in this land of sunshine and plenitude of fresh air the white plague has made its presence felt, directly or indirectly, in almost every home in the land. The city, the town, and the country homes are affected, and the flower of our people have been, and will continue for some time, to be carried off, most of them at a time when they have reached the age when they would be of greatest importance from the standpoint of national efficiency.

In a consideration of disease generally, there are six factors of responsibility: (a) the individual, (b) family, (c) social, (d) municipal, (e) provincial, (f) national.

Even where it is not of a communicable character, we find all these factors so associated that by their co-operation the greatest benefits may accrue to all.

The individual.—Where able to pay the expense, the individual endeavors to pay the cost of professional services in the case of personal illness. In the instance of mechanics and others, both male and female, the opportunity is taken by many to provide against this accident of life through the means of sick benefit societies or similar organizations, and in some cases this has been extended to children.

The family.—In this case the responsibility is often a divided one—in the care of the children, the parents, when able, providing therefor, and often when the latter have reached the wage-earning period, they in turn assist in the defraying of the expenses of illness of their parents or other members of the family.

Where, through inability to meet this extra charge—this extraordinary expenditure—then the two next factors come into play, relief being sought for in hospital treatment, of which we have, fortunately, innumerable instances in every city in Canada.

*Address delivered before the Anti-Tuberculosis Conference, Halifax, January 26th, 1912.

If both of the foregoing factors were able to meet the demands made upon them and thus adequately cope with the problem of caring for the sick and those invalided by disease, then the question would be a comparatively simple one. But we know such is not the case—those who are not rich in this world's goods are always with us, and on account of their environment, their reduced vitality, they are the ones who unfortunately require our assistance, not only they, but very frequently those dependent upon them, for their very sustenance.

Social.—It is here, thanks to a broad Christianity, that an opportunity is afforded for those more blessed with this world's goods to find an avenue in which to display in a practical manner an interest in their fellow-man, for—

> "How many desolate creatures on earth
> Have learnt the simple dues of fellowship
> And social comfort in a hospital?"

As a result of the difficulties outlined in the foregoing factors, we find that for centuries hospitals have been provided by those charitably inclined, and rich indeed have been the endowments made by an army of good workers who have left an example which many of the wealthy of the present day princes of finance have willingly followed. The result is seen in the magnificent general hospitals scattered throughout the civilized world.

In this young country where for many years great wealth had not been accumulated by any particular class, it was found impossible as a rule to raise sufficient funds to erect and maintain hospitals by public appeals, although their necessity was evident by reason of the general want of money whereby the masses could obtain the care and treatment incident to sickness. As a result we find that very wisely the body corporate took up the task of assisting in the good work.

Municipal.—And many municipal councils have not only assisted in the cost of the erection of buildings, but have come very liberally to help in the annual maintenance. In some instances the city council bears the cost of maintenance over and above that met by the receipts from pay patients and donations.

Provincial.—After this we have in some instances the aid received from the Provincial Government, which, under the British North America Act, they are authorized to give—hospitals being eleemosynary institutions.

The assistance given is usually on the basis of work done at a per capita grant on patients paying a minimum daily fee.

In this manner the province at large assists in the medical care of those who are not able to pay the full cost of maintenance, and each hospital is upon the same basis so far as financial aid from this source is concerned.

National.—Turning to the last factor—the federal government—it is claimed that assistance is rendered by reason of the subsidy given to each province, and here the national responsibility ceases.

So far we have been considering the care of diseases of a non-communicable nature. These have been by statute placed in the hand of the municipal authorities, who are responsible for their care either in hospitals or in their own homes under the direct control of the officers of health, to whom they must be reported by the medical practitioners. The expense of treatment is borne either by the individual or at the cost and charge of each municipality, there being an entire absence of any appearance of charity in the work.

But what of the national calamity? It is at once a public health problem, a social and an economic problem, and, being one of economics, therefore at once one which commands the consideration of municipal, provincial and federal authorities—it is even more, it is one demanding medical research and requiring skilled therapeutic management.

And if it is to be arrested, it requires for its conquest the promulgation of a more comprehensive policy than has up to the present time been adopted in Canada.

All the factors enumerated as assisting in the care of those suffering from disease and accident, mut be so marshalled and the campaign organized that we are assured of victory—nothing else will be satisfactory, and to this end all our energies must be directed. The desultory firing which has been going on in different portions of the Dominion is not without its effect—but where is the man or the woman that is satisfied with what we are doing or what has been done?

This very conference of the Halifax League is an indication that you are not. It is a sign that you believe that more should be done, and the time is near when the marshalling shall be done for the national advance.

The question in Canada to-day is how each of the factors mentioned shall be so co-ordinated that the best results will be obtained?—for each has its sphere to fill; the question is, how best can it be done—done efficiently and economically? Each

factor must act as a stimulant to the other, and the central authority, the federal government, must assist and stimulate all the others; indeed, I would add it must provide the general to command the forces—a responsible, a well-organized and well-equipped health branch.

As health is a national question, and not one that should be relegated to provincial boundaries, so that particular disease consumption is one that cannot be controlled by a mere flank attack in any one of our provinces. From the very nature of the insidious and prolonged character of the disease, the sufferer often moves from place to place in the search of health, and for a time moves about without becoming a burden on any particular community. The time, however, arrives when he fails both financially and physically, and some person or place must care for him, and often it is not the place of his citizenship, and frequently not his home province.

From the very nature of the disease it is impossible to quarantine him in any particular municipality, and, if possible, certainly not always expedient, yet in his wanderings he may have infected many a home by his carelessness and thus sown the seeds of financial burdens where often they can be least borne.

This is one of the difficulties which confront us in Canada to-day; the newer provinces in the West find that with the tide westward many a consumptive has moved west, often in the search of health, and that ultimately he breaks down and becomes a charge in districts which can ill afford and have not the accommodation for his care. It is not to be wondered at that these and other difficulties confront us in the conquest we are engaged in. It takes cash to carry on any warfare, and we cannot hope for success without money.

Take one example. A patient is brought before a physician for examination—the full diagnosis is made—the patient or his friends are informed—the first question is, What are the chances of recovery? The answer, of course, depends upon the financial condition of the patient. In about 75% of the cases the answer is, "If you can afford to do this and that, then your chances are so and so. If you can't—"

The old-fashioned treatment by medicines costs only a few dollars, but the new method of cure costs money, and the expense is distributed over a considerable period of time, and when once cured it even costs to keep him in the condition of healthful resistance to its farther progress.

It will thus be seen that the doctor's prescription for the consumptive is a much more expensive one than that of the doctor of twenty-five years ago. To most of us the order is prohibitive when viewed from the standpoint of the personal pocket.

This is the crux upon which the whole tuberculosis work turns, for if the crusade is to be successful it must in the main be carried out upon comprehensive lines, so as to embrace social, municipal and governmental assistance. Viewed from the standpoint of government assistance, it can be claimed that economically it pays, as under modern treatment life is prolonged and the individual is saved to the community for a longer period of time than he would under the old form of treatment, and during this prolonged period of life he is able in a large proportion of cases to act as a wage-earner in the community where formerly such cases were a burden to the state.

From these and many other reasons which will occur to a student of this question, it is quite evident that municipal, provincial and federal assistance is necessary in the carrying on of the crusade. How to co-ordinate them so as to secure the greatest efficiency is the question. The answer is a difficult one, and cannot be given offhand. Each province in Canada works out questions of this kind as well as, indeed, all others upon lines best suited to its own peculiar conditions. The first thing is to have an acknowledgement of the obligation. That an obligation exists has been conceded in most of the provinces of Canada, and in a feeble way by the Federal Government.

It now remains to work out a plan whereby these powerful factors can stimulate each of the others concerned. The question of financial assistance is one which I will not touch upon—it is one to be considered by yourselves and the government which represents the people. There are, however, questions of public health which have an important bearing upon the health of the people generally, and as every health measure is a movement in the right direction it is quite proper to refer to some of them.

The first that strikes me is that of notification of each case of the disease. That can and should be done; it is essential that the municipal authorities should know at the earliest possible moment of each and every case of the disease, not for the purpose of quarantine—that is out of the question, but in order to permit of the institution by the authorities of enquiry by trained house visitors as to the personal and domestic conditions of the sufferer and his relatives—the carrying to them of the

information so essential to the protection of the sufferer against himself and for the protection of those around him, and, what is still more important, the constant oversight of the household by what is known as the domiciliary visit—and coupled with this the health authorities should be empowered to supervise the disinfection of infected houses. This implies the adoption of a provincial law.

We have then to consider the youth of our country, those of the pre-school age as well as those of the school age. It is an old adage which we are prone to forget, that an ounce of prevention is worth a pound of cure. Apply it to health matters and we can safely say that a dollar spent in the prevention of tuberculosis is worth many thousands of dollars spent in the way of the saving of life, or, to put it another way, money expended in prevention is more than repaid by the increased cash value of a healthy community.

By the adoption of a comprehensive system of medical inspection of school children, such as will meet the requirements of the people of this province, it can safely be said that a powerful aid would be given to the conquest of consumption. If properly carried out, those children who are weak and debilitated—those who are fit subjects for its infection—should be so dealt with that their physical condition could be improved so that while being taught the instruction would be given in outdoor schools, where the instruction would be both physical as well as mental. At the same time instruction must be given to all pupils as to the value of health, the manner in which it can be secured, and as to how this disease, as well as others, can be prevented.

I am of the opinion, if medical inspection is to be worth anything, it should extend to all the grades in our schools and colleges, and as evidence of this I would quote the words of Prof. Third, of Queen's University, Kingston, who says, in referring to the provision made of shacks at the General Hospital in that city:

"The shacks at the hospital are only for incipient cases and, curiously enough, for some years have been occupied by students of the University suffering from tuberculosis. So much was the student body impressed with the good results to their fellow-students in adversity, and the general educational value of the shack, that they asked to be allowed to erect one."

This work is primarily a health one and not an educational one, and should be placed in the hands of the health authorities,

who should secure the co-operation of the educational authorities. The reason for this is evident if we consider for a moment that it is not confined to the pupils themselves, but to the homes where they live, and to the families to which they belong; and it can only be successfully carried out by the legalized health authorities. There is no duplication required and there need be none if the system is properly organized and all parties will co-operate.

Another feature of provincial work is that of the systematic collection, recording and tabulation of vital statistics. This part of the function of provincial government is the clearing house for the health officer. It permits of an intelligent study of the extent of disease and its ravages amongst the various classes of the community, and from the standpoint of a tuberculosis crusade, it is invaluable and should never be lost sight of as work to be carried on by a provincial government.

Having in mind the fact that bovine tuberculosis exists in our country and that milk from tuberculous cows is sold to-day—and further remembering that it is the artificial food of too many Canadian babies, it is essential that the provincial government should by statutory enactment provide the means by which city and town authorities have the power of the inspection of dairies and dairy cattle from which the milk is sold—this should include the power to license after inspection and the tubercular testing of all such cattle. The question of the pasteurization is one too large to discuss at this time—there is much to be said in its favor and, as in all questions, there is something to be said against it—certainly it can only be considered a tentative measure.

Turning now to the broader field, that of the various agencies or remedies which have been adopted in the modern prescription for tuberculosis, we find the following: (a) The sanatorium; (b) the dispensary, with the visiting nurse; (c) the preventorium for the weakly, though not necessarily the tubercular; (d) the day and night camps for those selected patients who have recovered so as to be able to work, and yet who cannot well live in their own homes; (e) the farm colony for those patients who are best suited for a limited amount of light farm work; (f) the hospitals, where the selected cases can be treated, and to which certain cases should be removed by the authority of the medical officer of health; (g) the home for advanced cases; (h) the assisting of those who for various reasons must continue living under what is known as the home treatment.

In addition to all of these, it must be remembered that the health authorities should have a competent staff of visitors whose duty it should be, along with others that will suggest themselves, to raid the haunts of disease and dirt—not waiting for notification, but anticipating and thereby preventing disease.

If the victory is to be assured, all these remedies must be utilized; each has its place and its effect—they are like links in a chain, they must all be present, and each must be called upon to lend its fullest aid. It is absurd to expect the sanatorium to do the impossible, to be the cure-all. But this, as was stated before, costs money, and, therefore, the co-operation of the six factors of responsibility becomes necessary.

But, in conclusion, what shall we say of the Federal Government? It certainly has a responsibility which has in part been fully acknowledged by the annual grant of $10,000 for propaganda work. The solution of the question, how that should be materially increased for the benefit of all, is a problem which has been engaging the attention of many for a long time. I have given it serious and anxious thought since assuming my present duties, but have unfortunately not been able to arrive at a satisfactory and workable conclusion. Our provincial interests are diverse, and what would suit one would not be acceptable to another province. I have about reached the conclusion that public health work in this Dominion should be nationalized, and then, and only then, can our crusade against disease, and against tuberculosis in particular, be carried to a successful issue.

We have not far to go for an example. It is the British precedent, the Local Government Board, the secretary of which for all practical purposes is Minister of Health for Great Britain —and we have an example how he can work out from a national standpoint a scheme having for its object, amongst others, giving direct aid to the tuberculous.

There may be differences of opinion as to methods adopted, and they certainly are open to criticism, but there can be no two opinions upon the object sought for by this scheme of sick and invalidity insurance, and the grant of one million pounds sterling annually for the care of the consumptive.

I have every confidence it will subsequently be worked out to the benefit of a large mass of the people, to the prevention of disease and suffering, and I can see how a similar measure could be planned for Canada under a national health law controlled by a federal Department of Health.

If this cannot be done at once, I see no reason why it should

not be brought about in a short time. There is certainly one thing the Federal Government can give us, and that is a Pure Food Law, not an Act in mere name only as the Adulteration Act is to-day—a farce in its present form and administration. What is required is an Act whereby a man can do something to give us that which we should have—pure food of all kinds—and then a good strong man to administer it in the interests of all—a man who will do it fearlessly, and thus protect us along a line which one may say is uncovered in Canada to-day.

ON THE DIAGNOSIS OF LYMPHO-SARCOMA OF THE STOMACH *

By O. C. Gruner, M.D., Montreal.

The frequency with which cases of primary sarcoma of the stomach are reported has increased during the past decade. The assumption is that the disease is not altogether negligible by the clinician, especially as suggestions come up by which the existence of the disease may be surmised during life. While the main symptoms may be exactly those of gastric carcinoma, the probability of successful surgical treatment varies, and a need for differentiating these two new growths is accordingly created.

There are three conditions which simulate each other as well as carcinoma in the case of the stomach. These are: (1) True primary sarcoma—round-celled, spindle-celled, or mixed; (2) lympho-sarcoma, either with or without generalization of disease over the hæmatopoietic tissues; (3) chronic inflammatory processes of obscure origin (linitis plastica, and such like).

It is likely that some of the so-called diffuse primary sarcomas of mixed form, where the prognosis should be quite hopeful after excision, have been mistaken for linitis plastica, while the round-celled types have been mistaken for lympho-sarcoma. It thus becomes the duty of the clinical pathologist to make himself familiar with the points enabling a histological diagnosis of the excised part as well as with such subtle distinctions in the differential blood count which would go towards helping the clinician.

The various aspects of this subject which call for investigation are best brought out by reference to some cases which have come to autopsy at the Royal Victoria Hospital, Montreal. The following case in particular presented characteristic features:

The patient was a young married Russian woman, who had only had one child in five years, and that three months before death. The first symptoms of her fatal illness did not, however, appear till one month after the delivery of this child. Vomiting and lassitude appeared, and loss of weight occurred rapidly. There was extreme pallor, and the skin was slightly yellow, suggestive of pernicious anæmia. Abdominal examination was nega-

*From the Pathological Laboratories, Royal Victoria Hospital, Montreal.

tive. The temperature was subnormal; the pulse a little rapid (124), and the blood count gave: red cells 1.2 mill.; white cells 24.6 thousand. Death ensued four days after admission.

The autopsy showed the following main features: mottling of face with brown pigment, Jewish features, enlargement of glands in the groin, but not at the root of the neck, œdema of the left foot.

Lungs—the vessels were full of clot. There was slight emphysema; no tubercle. Heart—small; the muscle was very pale, and the papillary muscles and left ventricle walls showed extreme fatty degeneration. Abdomen—showed no abnormality as regards the position of parts, state of peritoneum, etc. The lumbar and appendical glands were enlarged. The veins contained stringy clot. The liver showed only a fatty change. The spleen showed a few small cysts, but no metastatic deposits; the Malpighian bodies were not enlarged and, microscopically, proved to be ill defined, while there was diffuse hyperplasia of the endothelium of the pulp channels. The kidneys were anæmic, but otherwise natural. The pelvic viscera showed no noteworthy change. The thymus was persistent and showed perfect structure.

The stomach was greatly enlarged. The lesser curvature was occupied by a large mass of growth of chalky white color, extending on each aspect of the stomach almost as far as the greater curvature. The edges of the growth were very thick and ended almost abruptly. At the very centre of the mass was a circular ulcer 3.5 cm. in diameter with a thin cut edge. Its floor was slightly granular. The stomach wall, where occupied by growth, was of almost absolutely uniform thickness (about 1.5 cm.) and the unaffected portion was of normal thickness. The growth was nearer to the cardia than to the pylorus and it terminated in the former situation in three prominent ridges which projected into the lumen of the œsophagus. Two small nodules occurred under the peritoneal coat close to the great curvature and half-way between the main mass and the pylorus. Along the edge of the stomach were one or two enlarged glands and a few white nodules were scattered along the great curvature, on the peritoneal side. The tumor mass had a striking similarity to a small placenta, the rough surface being on the inner side of the stomach wall. The gastro-hepatic omentum was infiltrated by growth.

Histologic Characters of the Tumor Itself.—The tumor is clearly limited from the normal tissue. The glandular mucosa

ends almost abruptly where the tumor mass begins. Tumor cells infiltrate between the individual glands to a slight extent, without displacing them. Towards the centre of the growth the glandular elements have become invisible, but their presence is easily made out for some distance inwards from the margin of the mass. The study of this portion makes clear what is of first importance in deciding upon the nature of the condition—that the growth arises in the submucosa and pushes the original mucosa before it until the pressure causes the atrophy of the glands. There is active infiltration of the muscular bundles deeper down. At the œsophageal end, the new tissue can be traced for a considerable distance along the subepithelial tissues, the epithelium remaining perfectly intact. The actual edge of the growth is enclosed in the smallest possible amount of a loose small round-celled infiltration. The tumor cells are very loosely arranged, are quite discrete and appear as almost regularly spherical structures laying free amongst a very feebly fibrillar groundwork. Spindle cells are but rarely seen in this connective tissue basis, indicating that fibrous tissue is practically absent. The cells themselves, when carefully examined, fall into three or four types. The most conspicuous are what one may call florinucleate cells—cells whose nucleus is quadri—or quinque—partite like the petals of a flower when seen from the front. Such cells stain rather deeply. Other cells, equally large, have a rounded very feebly staining nucleus with a few scattered chromidial granules at their periphery. Other cells represent the small lymphocytar forms which one meets with in pseudo-leukæmic infiltrations. Lastly, a similar type of cell, but with a very pallid nucleus occurs in small proportion. The order in which these various cell types have been named indicates at the same time their relative preponderance.

Studying these types more minutely in comparison with those seen in malignant granulomas, pseudo-leukæmias and true sarcomas, certain essential points of difference of cell structure appear which can be utilized for diagnostic purposes by the hospital laboratory worker. It is not proposed to discuss this aspect of the subject at this time.

The lymph-nodes did not show infiltration by tumor cells, but the ordinary follicular structure was lost, the whole gland having a diffuse lymphoid tissue through it, as in some forms of pseudo-leukæmia. The omentum presented similar growth to that in the stomach.

The case was, therefore, one which might be called a round-celled sarcoma, but was strictly a lymphosarcomatous mass with

subordinate changes in other parts of the body. The case was one of local lymphosarcomatosis as opposed to the general type. The characteristic histology is the uniform distribution, through the tissue, of discrete round or ovoid cells of varying size, but very similar to each other in nuclear characters, and the absence of any appreciable fibrillar tissue.

According to Manges[4], who reports three cases which could be classed under the local type of lymphosarcoma, the frequency of the condition reaches from 1.5 to 8% of all gastric tumors. This indicates that a diagnosis of gastric carcinoma should never be made without considering the possibility of this form of disease being present. Manges, from a review of the literature, states that sarcomas arise below the mucosa, generally along the greater curvature, never cause pyloric stenosis, and only occasionally produce metastases.

The generalized type (example published by Shoemaker[6]) is indicated by the presence of widespread enlargement of the lymph nodes, and by the presence of enlargement of the tonsils and of the adenoid tissue at the back of the pharynx. It may be associated with enlargement of the spleen. This chain of lesions is included in the term Kundrat's[3] sarcomatosis (Mayr[5]), and is due to the hyperplastic overgrowth of the lymphoid tissues which are scattered through the body—along the intestine, the nodes, the Malpighian bodies of the spleen, and in the marrow of the long bones. It is usually only by feeling the glands enlarged in a case of marked tumor formation at the upper end of the stomach that the differentiation would be possible, but an exploration of the bone marrow of the tibia under an anæsthetic would materially help to detect the nature of the case, as the presence of the lymphadenoid type of cell in large number would be suggestive. This was first pointed out by Ghedini[1,2].

A careful study of the lymphoid cells met with in the blood film taken from a doubtful case would give suggestive results. The superabundance of small lymphocytes in the true sarcoma, of medium sized or large mononuclear cells in lymphosarcoma, or of polynuclear leucocytes in carcinoma are frequently characteristic. In pseudo-leukæmia one may expect an increase of the medium and large sizes of mononuclear cells which would cause confusion to diagnosis, although, as said before, the condition of the stomach would be noticeable as a rule. (It was not detected clinically in the case quoted). The examination of the bone marrow would show an increase of the medium-sized lymphoid cells and a diminution of the myelocytes in generalized lymphosarcoma, while no essential change from the normal would be ex-

pected in localized lymphosarcoma or carcinoma. The spleen would be considerably enlarged in pseudoleukæmia. It will be understood that in practice there are all possible gradations between a pseudoleukæmia without local gastric enlargement and lymphosarcomatosis with multiple small polypoid tumors in the stomach (Mayr[5]) and localized lymphosarcoma of the stomach.

The diagnosis of linitis plastica (sclerotic gastritis) calls for consideration only after removal of the affected organ. As previously stated, the condition has in some cases probably been confused with mixed-celled sarcoma. In linitis plastica the walls are much thickened by cellular infiltrate, and the viscus shrinks markedly in size. The cells of the infiltration are "small round cells" of varying size, intermingled with strands of spindle cells. The clinical symptoms are similar to those of carcinoma, though there is usually not much wasting. There is no leucocytosis or lymphocytosis, but otherwise the blood changes may be as in carcinoma, especially that type of carcinoma associated with extreme toxic action on the bone-marrow (myelotoxic form).

To summarize, we have the following features bearing on the question of lymphosarcoma from the point of view of the clinician and the clinical pathologist. The disease commonly described as "sarcoma of the stomach" occurs in three forms, only one of which is a true sarcoma. It is possible to distinguish these conditions from carcinoma during life, and the prognosis varies somewhat according to what form of "sarcoma" is present. The sclerotic gastritis cannot be certainly diagnosed until the tissue involved has come to the clinical laboratory. The prognosis of each condition, except perhaps that of true sarcoma, is, if anything, more favorable than in the case of carcinoma.

The disease occurs with sufficient frequency to justify its consideration in differential diagnosis.

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Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, F. A. CLARKSON, BREFNEY O'REILLY AND F. C. HARRISON.

The Administration of Glucose in Severe Diabetes

Klemperer (*Therapie der Gegenwart*). In order to determine whether v. Noorden's oatmeal diet was dependent for its success upon some quality inherent in oats, the writer administered to a series of severe diabetics, pure grape sugar. Cases were selected, in which the urine contained much sugar, and in which a starch-free diet did not lead to a disappearance of the glycosuria. The same rules were followed as in the oatmeal diet. After a period during which the patients received no meat, 100 to 150 gr. of grape sugar were given, the diet still remaining free from meat. The results were quite as good as with the oatmeal diet. Klemperer concludes that the latter may be replaced by any starch-food (bread, rice, potato and the like) provided that the regimen be preceded by a meat-free period and that, during its administration, the amount of proteid eaten be maintained as low as possible.—*Interstate Medical Journal.*

A New Test Breakfast

Mintz proposes bouillon as an unusually satisfactory substance for a test breakfast, as it is homogeneous, stimulates the glands of the stomach to their maximal functioning, independently of psychic factors, while it permits exact estimation of the absolute quantities and concentration of the gastric juice secreted. He uses the Liebig extract of beef, dissolving 100 gm. in 500 c.c. of boiling distilled water, filtering and sterilizing. This is the stock. For the test he dilutes 5 c.c. of the stock with 100 c.c. water. Just before using he dilutes further with hot water to a total of 475 c.c. and adds 2 gm. of salt. The patient drinks 450 c.c. of the broth thus prepared, 25 c.c. being kept for control. He enumerates a number of advantages presented by this technic and the peculiarly instructive findings with it. Among other things it shows that irruption of bile into the stomach content may occur as an automatic means of counteracting an excess of acid in the stomach content.

The Nucleus Test

Kashiwado has simplified and rendered more sensitive Schmidt's nucleus test by using isolated and stained nuclei from the cells of calves' thymus tissue for the test. He reports extensive experimental and clinical research with it. His statements are corroborated by Schmidt, who adds the details of thirty-two cases of affections of the pancreas in which the test gave instructive findings. The test gives a positive reaction in diseases of the pancreas with organic changes destroying the entire secretory function. Unless this is entirely lost, the findings are generally negative. With functional disturbances the findings may be transiently positive.—Med. *Wochen. Berlin and J.A.M.A.*

Cerebral Rheumatism

Acute cerebral rheumatism ought to be easily recognised. It supervenes usually on either an acute and severe febrile polyarthritis, or on an assemblage of minor rheumatic manifestations, although it may occur in the course of quite mild joint troubles. Still, it does not in itself display definite clinical peculiarities, and has, therefore, to be distinguished from certain other forms of cerebral excitement or irritation. We may have to deal, in fact, with:—

(1) Nervous delirium, in rheumatic hyperpyrexia. This "delirium" is, however, of a quiet type.

(2) The delirium of salicylate intoxication, which comes on suddenly, is apyrexial, and is accompanied by other signs, such as eruptions, etc.

(3) Alcoholic delirium. Distinguished by its prodromata and characteristic manifestations.

(4) Uraemia. Uraemic delirium is marked by hallucinations, albuminuria, hypertension, low temperature, and subsultus, etc.

(5) Acetonaemia. There is considerable agitation, hallucinations are common, and there is the characteristic smell and urinary reaction.

(6) Lastly, there are certain conditions such as influenzal and other forms of meningitis, distinguished by the results of lumbar puncture.

(Debertrand: "Gazette des Hôpitaux.")— *The Universal Medical Record.*

In a paper on "Aching Throat," read by Dr. W. H. Kelson, before the Medical Society of London, and reported in the Lancet, it was pointed out that although not serious to life, aching throat was important, because very common, very depressing, and very persistent. The patients were mostly middle-aged, and might belong to either sex. They might show the various signs of chronic pharyngitis and other local pathological conditions, but these might be entirely absent and the throat appear normal. Anaemia, gout, or rheumatism might be present, but the treatment of these alone seldom cured the aching. Most commonly the patient suffered from flatulent dyspepsia with constipation. The nerve-supply was exceedingly rich and varied, but, on the other hand, the sense of locality in the pharynx was very vague, consequently pain was often referred to parts in this region other than those actually stimulated. Neurotic conditions and over-use of the voice would not explain the majority of cases of "aching throat." A number of cases were then referred to, including two in which the cause had been salivary calculus. Since dyspepsia was by far the most common associate of aching throat, this must especially be treated, the assistance of a dentist was very often necessary, and the question of diet must be carefully gone into. Cleansing washes and gargles might be used for the throat and nose, but operative treatment had better be avoided in the first instance. The aching might be due to toxins, or perhaps be a referred pain from the stomach.

OBSTETRICS AND GYNAECOLOGY

IN CHARGE OF ADAM H. WRIGHT, K. C. M'ILWRAITH, FRED. FENTON, AND HELEN MACMURCHY.

Treatment of Uterine Fibromata with Radium

H. Cheron, (*Jour. de méd. de Paris,*) finds that radium has somewhat the same action in uterine fibroids as the x-rays. Radium causes a lessening of hemorrhages, both between and at the menstrual periods, and some retrogression in size of the growths, due to a lessening of congestion in the uterus. The treatment must last for some time. Menstruation will become much less although the menopause is not at once established. If the treatment is continued the menopause will be established and without any unfavorable symptoms. The effect on the ovaries is not the same as that of the x-rays, since the development of the Graafian follicles is not interfered with, and a number of the author's cases became pregnant later. Neither does it seem to affect the production of the internal secretion of the ovaries. The action of the rays should be limited to small pelvi-abdominal fibroids, and especially those that by their distance from the abdominal wall are inaccessible to the x-rays; contraindications to the use of radium are malignant degeneration of the tumor, anemia resulting from severe hemorrhages, severe compression of the abdominal organs, and especially torsion of the ureters, increase in size of the tumor in spite of the applications, and undesirability of provoking the menopause. The application is made by introducing into the cervix up to the isthmus a tube of radium, protected by layers of gauze, so that it will give out beta and gamma rays. The tube should be left in place for six to eight hours at a time, and sittings should be repeated every three days for twelve sittings, if a decided menopause effect is to be obtained. A radium dermatitis may be produced in the vagina and cervix, but it is not serious and may be avoided by proper care; it is evidenced by a copious discharge from the uterus. The general effects of the treatment on the system are excellent, pressure is relieved by lessened congestion, and the patient feels well.—*American Journal of Obstetrics.*

Remote Results of Radium Therapy on Adnexitis and Periadnexitis.

Henri Cheron (*Rev. mens. de gyn. d'obst. et. de paed.*), says that in many cases the medical and surgical treatments of suppurative lesions of the adnexa are unsatisfactory on account of their slowness and the confinement to bed that is necessary. In the use of radium for these conditions we have a method of treatment that is rapid, lasting from one to six weeks, and that is definitely curative. It renders the prognosis much better. The radium treatment is the best medical treatment for these lesions and is equally effective with surgical measures, it enables us to save one ovary functionally perfect when both are involved.—*American Journal of Obstetrics.*

Vaginal Cesarean Section: Its Technic, Results and Indications

Cyrille Jeannin (*Progrès méd.*, Oct. 21, 1911) says that the vaginal Cesarean section is applicable to all cases of induration and nondilatation of the cervix uteri in pregnancy. The classical abdominal Cesarean section is applicable to conditions in which there is a narrowing of the pelvis, while the vaginal is never applicable in such cases. The Dührssen operation, as it is called, should have a place in surgical obstetrical practice. It is easy of execution and when done carefully and conforming to certain necessary rules has few complications and causes few bad symptoms. It is indicated whenever immediate evacuation of the uterus is necessary and when the ordinary Cesarean section cannot be done on account of the condition of the woman. Again it is indicated by a lack of dilatability of the cervical tissues. It is contraindicated by contraction of the pelvis, pelvic tumor, atresia of the vagina, very large fetus, abnormal implantation of the placenta, and previous infection. It is useful in the interest of the mother in eclampsia, separation of the normally implanted placenta, cardiac accidents, rigid cervix, and amniotic infection; in the interests of the child in prolapse of the cord, agony of the mother, and death of the mother. It consists of incision low down of the cervix in the median line, anteriorly or posteriorly, a location in which hemorrhage is slight, below and outside the peritoneal cavity. The author thinks we cannot have too much room, so as to be able to see what we are doing. The uterus is drawn down, the anterior culdesac opened, and the interior wall of the cervix incised.

The posterior lip is incised and the peritoneum separated. The child is extracted by forceps or version; the placenta delivered, and the uterus tamponed with antiseptic gauze. Sutures are placed to close uterus and vagina, and the perineum is repaired. the prognosis is good. The complications are hemorrhage, tearing of the uterus, lesions of the peritoneum and bladder, and postoperative infection.—*American Journal of Obstetrics.*

Treatment of the Mother after Child-birth without an Assistant

Every household, even the veriest hovel, has an oven, some clean rags, and a yard or two of old sheeting or towelling; so there is never a good excuse for applying unsterilized vulvar pads in an emergency case of labor. Every mother dreads "blood poisoning" and fever; instruct her how unwashed fingers, touching her pads, her vulva, or her breasts, may induce the complication she dreads and you may rest assured there will be no puerperal infection.

Without an assistant, or with an assistant, it is the duty of the obstetrician to remain at the woman's side at least twenty minutes after the birth of the placenta, with a hand resting on the fundus. As to the use of ergot there are three points one should always bear in mind. First, that a physiologically active and recently made supply must be carried; second, that the effect of ergot continues only half an hour, semihourly doses being required if the effect is to be maintained. Third, that it acts in fifteen minutes by mouth. In a normal confinement, ergot is certainly unnecessary and should not be given as a routine practice. If, for any reason, it is indicated during the second stage, it should be administered without fear of the bugaboo of hour glass contraction. This condition, like that of "adherent placenta," I have never observed in a fairly active practice in country, city, and hospital service. One who has mastered the technique of Credé's method of delivering the placenta will find it difficult to credit the old wives' tales of afterbirths "growed fast to the spine!"

Folded in a sterile towel I carry an emergency kit of sterilized instruments, scissors, scalpel, hemostats, needles, sutures. With this at hand it is a simple matter to cut the cord and dispose of the infant; also, if need be, to repair a lacerated perineum. In a primipara with a rigid perineum, or where the fetal head is large, or the occiput posterior, the preliminary placing of perineal sutures is a harmless and satis-

factory measure; it gives better coaptation than is possible otherwise and is much easier than the post partum suture.

No douche, no enema, no breast pump, no massage, no binder is a good rule to follow in all normal cases. Nature's germicide—the lochia—surpasses anything medicine can supply. Most breast abscesses are the result of pernicious interference by ignorant or uncleanly persons. A woman's "figure" is not preserved by wrapping about her a wrinkled, rolled up, hot, ill-fitting, unhygienic "binder;" the binder binds only in imagination, unless an insertion of elastic webbing is used.

When the patient begins to complain of backache, strap the relaxed sacroiliac joints with adhesive plaster strips across from spine to spine of ilium.

When she fails to urinate in twelve hours, set her up on a chamber pot—not a bed pan—and do *not* resort to the catheter. Most women are still good Indians; they do not drop dead when allowed to sit on a chamber pot.

Do not permit the temperature to be taken unless the patient is obviously ill.

When the lacteal secretion begins, support the breasts for a few days, if painful, with a binder or bandage. Repeat the warning: "Hands off." See that the baby is put to the breast every four hours from birth and every two hours after the milk appears.

On the third night a purge should be given—phenolphthalein, five to ten grains, well masticated, and followed in half an hour by some fruit; or jalap, five to ten grains; or castor oil, one ounce, in milk or in emulsion. For the stool, too, the patient should be permitted to sit on a commode if she so desires.—*New York Medical Journal.*

Editorials.

PRISON REFORM

The aim of the authorities, according to the modern methods of prison management, is to reform rather than punish first offenders. It is generally conceded that Hon. Mr. Hanna's system in Ontario is the best in the world. A very interesting article on the subject, written by Harold Wilmott, appeared in the March number of *Maclean's Magazine.* In 1907 Mr. Hanna arrived at the conclusion that the contract system in the Central Prison was unprofitable as well as objectionable to other labor interests, and that the general effect of prison discipline was demoralizing. He soon decided that he wanted a farm with certain specifications—good land, plenty of stone for road making and building construction, sand and gravel, good drainage, pure water and good railway facilities. After much searching he found almost exactly what he wanted, the "Guelph Farm," which is really a number of farms in one block.

After getting possession in April, 1910, fourteen prisoners were sent from Toronto to a house on the Guelph Farm, under the charge of two officers. Mr. Hanna appealed to their manliness, their better instincts and sense of honor, as he explained the scheme to the men. As Mr. Hanna told us afterwards, he "was frank with the boys, and wanted to know how they would take it." Their answer was, "you seem to be playing fair, and we will do the same thing." The results were eminently satisfactory. Within a few months 100 men were quartered on the farm, with one dozen guards. They worked hard and took

great interest in their work. They built dormitories and administration offices, tilled the land, put in the crops, and soon engaged in the most modern sort of mixed farming. The men enjoy their work on the farm, they become, therefore, healthy and strong, and when they leave are generally willing and able to earn an honest living.

One interesting incident is related. A beautiful concrete bridge was built entirely by convict labor last summer. During its construction it happened one afternoon that everything was ready to run the concrete. The work, if started, had to be completed that night. It meant many hours of extra time. "What will you do, start now or leave it until the morning?" "Start now," was the unanimous response. They started and it was near midnight when the run was completed, and through all there was never a word of complaint.

THE TOXIN OF EXPIRED AIR

In a room which we would call badly ventilated, the air has a heavy, disagreeable odor, immediately perceptible to one on first entering. Exposed to this vitiated atmosphere for any length of time, a person becomes drowsy and uncomfortable, and later suffers from a severe headache. Not all the inmates, however, are affected to the same extent. Those who are habitually exposed to unhygienic ventilation develop a sort of immunity, while one of the great drawbacks to a life in the out-doors, is that the individual suffers a sense of oppression when compelled to spend any length of time in a closed room.

The older physiologists assumed a volatile, organic substance, which, when breathed, exerted a toxic influence upon the body. They based their conclusions upon the classical experiment of Brown Séquard. He arranged five bottles in series, with a jar of sulphuric acid between Nos. 4 and 5. Into each jar a live mouse was placed. Air passed in the direction from 1 to 5. After a short time, mouse No. 4 died, then No. 3, while Nos. 1 and 5 were apparently as healthy as ever. The subtle organic poison had evidently been absorbed by the sulphuric acid.

But Formánck, who repeated these experiments a few years ago, came to the conclusion that the toxic substance was ammonia from the urine and fæces of the animals in the jar; and, therefore, that the expired air does not contain a poisonous substance at all. He explained the well-known results of poorly ventilated rooms as due to an increase of Co_2 and of moisture.

But there can be no rest in any science, and so Prof. Leonard Hill, who has laid in the grave many a hoary superstition, undertook to reinvestigate. He placed some students in a glass cell where the air was breathed over and over again. The physiological effects soon showed themselves upon the men, who became languid and drowsy and quite indifferent to the work they were performing. Then an electric fan was started, which simply stirred up the air, and immediately they all began to feel better. In fact, they could get along very nicely when the carbon dioxide reached as high even as 5 or 6%. Hill's conclusions were that neither the Co_2 nor the hypothetical toxin had anything to do with the bodily discomfort. It was purely a case of getting rid of the heat from the body, and this, of course, was best accomplished by moving air.

With all the research upon serums, opsonins, etc., it would not be remarkable if this question were brought to the touchstone of experiment along the modern lines of immunity. In fact, quite recently, two observers have condensed the moisture from expired air, and injected it into animals, with the result that they, later, showed marked signs of anaphylaxis. Our knowledge of this phenomenon is so vague that we are not yet warranted in drawing definite conclusions, but the field is at least very interesting.

F. A. C.

THE LOCAL SANITARIA

Dr. Charles J. Hastings, M. H. O., of Toronto, in his Health Bulletin for January, said there were 576 deaths from tuberculosis in the city last year, and for the stamping out of the disease he advised the creation of a Dominion Health Board to co-operate with the Provincial, County and Municipal Health Institutions, by the establishment of County Hospitals for advanced cases and sanitaria and farms for incipient and curable cases. In Toronto a central dispensary, a farm and sanitarium for incipient cases and a hospital for advanced cases were needed.

Hon. Adam Beck strongly endorsed the suggestion, and said he preferred the plan of local sanitaria rather than the creation of a provincial institution. He wanted the Conservation Commission to investigate the whole question from a Dominion standpoint with a view to having the Federal Government assist in a general way the various local institutions in Ontario. Mr. Beck also expressed the opinion, that a headquarters should be established in Toronto,

which was the largest and most central city in the Province. This central institution should co-operate with outside districts. He also favored the establishment of a thoroughly equipped laboratory in Toronto, where the members of the medical profession could receive special training in the treatment of tuberculosis.

MODERN APARTMENT HOUSES

The rapid growth of the modern apartment house has been phenomenal, notwithstanding the strong prejudices against it in the minds of many, both inside and outside of the medical profession. We must recognize the fact now that it has become a permanent institution in all our large cities. It is generally believed, however, that the building of such a house should be carefully and properly "regulated." It is thought by many that the existing by-laws governing the erection of such buildings are not sufficiently strict in Toronto.

We are glad to be able to say that many of the apartment houses recently built in Toronto are excellent from a health standpoint, and satisfactory so far as fire escapes are concerned. There are three important considerations in connection with such buildings. They should be so constructed that all the rooms shall be properly lighted. A large block building with many dark corridors and dark rooms is very objectionable. This leads to the second consideration. The ventilation should be good. It generally happens, fortunately, that if the lighting is satisfactory, the ventilation can be made good.

The third consideration relates to dangers from fire. The people who live in apartment houses should

have easy access to fire escapes. We are told by a writer in the *Toronto News* that an iron ladder bolted to the outside of one wall is not sufficient for a building containing twenty or thirty families. An iron balcony with an iron staircase leading to the ground should be attached outside every apartment, and a system for giving a general alarm throughout each building should be compulsory.

HURON MEDICAL ASSOCIATION

The last meeting of the Huron Medical Association was held March 12th in Wingham. At the previous meeting, held December, 1911, there was some reorganization and new by-laws were adopted. According to the present rules there will be four meetings a year to be held at Goderich, Seaforth, Clinton and Wingham.

CANADIAN NATIONAL EXHIBITION

Dr. J. O. Orr, Manager of the Canadian National Exhibition, is making arrangements with the Dominion and Ontario Governments to erect a new structure on the grounds, which will be used both for Dominion and Provincial Exhibits. It will be in the form of the letter "E," and will be located between the new Dufferin Street entrance and the Transportation Building.

It is expected that one of the principal features in this new building will be the Health Exhibit of the Ontario Government in charge of Dr. Jno. W. S. McCullough, General Medical Health Officer of the Province.

McGILL REUNION IN NEW YORK

There was a very happy gathering of the Old Boys at the Café des Beaux Arts, New York, on the evening of February 29th, to celebrate the 17th Anniversary of the New York McGill Graduates Society. Addresses were delivered by Professor Adami, of McGill, Professor Geo. D. Stewart, of Bellevue, and Dean Geo. Kirchwey, of Columbia University. Dr. Andrew B. Montgomery represented the Graduates of Toronto, and Dr. Robert C. Moore those of Queen's at the banquet.

SEVENTEENTH INTERNATIONAL CONGRESS OF MEDICINE

London, August 6th—12th, 1913.

Provisional Programme of Subjects for Discussion.

Section I.—Anatomy.

1. The Excitatory and Connecting Muscular System of the Heart. (Jointly with III., 2.)
2. The Morphology of the Sympathetic System.
3. The Early Stages of the Human Ovum.
4. Cerebral Localization and the precise significance of Sulci.
5. The Morphology of the Shoulder Girdle.

Section II. Physiology.

1. Internal Secretions. (Jointly with VI., 1.)
2. Reciprocal Innervation.
3. Endogenous Metabolism of Proteins. (Jointly with III. (a), 5.)

Section III.—General Pathology and Pathological Anatomy.

1. The Pathology of Shock.
2. The Excitatory and Connecting Muscular System of the Heart. (Jointly with I., 1.)

3. Grafting of Normal Tissues as dependent upon zoological or individual affinity; autoplastic, isoplastic, heteroplastic.
4. The Pathology of Fats and Lipoids.
5. The Effect of Radio-active Substances and Radiations upon Normal and Pathological Tissues.

Sub-Section (a) Chemical Pathology.

1. Pathological Conditions due to Defects in Diet.
2. Clinical Applications of Pathological Chemistry.
3. The Chemical Pathology of the Alimentary Tract.
4. Cancer. (Jointly with IV., 3.)
5. Endogenous Metabolism of Proteins. (Jointly with II., 3.)

Section IV.—Bacteriology and Immunity.

1. Theories of Immunity and Anaphylaxis.
2. Nature of Virulence.
3. Cancer. (Jointly with III. (a), 4.)
4. Filter Passers.
5. Leprosy and Allied Bacilli.

Section V.—Therapeutics.

1. On the Comparative Value of the Cardiac and Vascular Remedies in Common Use.
2. The Mode of Action and uses of Remedies for Pain or Sleeplessness.
3. Chemical Toxines and Antitoxines.
4. A Laboratory Meeting.
5. A Discussion upon a subject relating to Balneology or Physio-Therapy.

Section VI.—Medicine.

1. Correlation of Organs of Internal Secretions and their Disturbances. (Jointly with II., 1.)
2. Differentiation of the Chronic Arthrites.
3. The Pathology of Heart Failure.
4. Diabetes.
5. The Clinical Aspects of Hæmolysis.

Section VII.—Surgery.

1. The Operative Treatment of Malignant Disease of the Large Intestine (excluding the rectum).

2. The Treatment of Tumors of the Brain, and the indications for Operation. (Jointly with XI., 5.)
3. Intra-thoracic Surgery.
4. The Treatment of early Renal and Vesical Tuberculosis. (Jointly with XIV., 1.)
5. The Surgery of the Arterial System.

Sub-Section (*a*)—*Orthopædics.*

1. The Treatment of Spastic Paralyses.
2. The Treatment of Scoliosis.
3. Radiography of Bones and Joints, and its value in Orthopædic Surgery. (Jointly with XXII., 5.)
4. The Treatment of Ankylosis.
5. The Treatment of Tuberculous Joints in Childhood. (To be on a different day from X., 3.)

Sub-Section (*b*)—*Anæsthesia.*

1. (*a*) Recent methods for producing Analgesia.
   1. Intrathecal.
   2. Local.
   3. Regional.

   (*b*) Contrast the immediate and after effects, especially Shock, *e.g.,* Intrathecal and Local Analgesia with Inhalational Anæsthesia, with special reference to Psychic Shock.
2. Recent methods of General Anæsthesia.
   (*a*) Ether.
   - (i) Open
   - (ii) Intravascular
   - (iii) Intratracheal
   - (iv) Nasal
   - (v) Rectal

Methods.

   (*b*) Inhalational Anæsthesia in association with Alkaloidal Bodies.
   - (i) Nitrous Oxide in Major Surgery.
   - (ii) Ether.
   - (iii) Chloroform.

3. Dosimetric Method of Administering
   1. Chloroform (*a*) Regulators.
   2. Ether (*b*) Mixtures.
4. Post-operative Effects and Toxæmias associated with Anæsthetics.

Section VIII.—Obstetrics and Gynæcology.

1. Cancer of the Uterus (Body and Cervix); operative technique and results.
2. Rœntgen and Radium Therapy in Gynæcology. (Jointly with XXII., 1.)
3. The Treatment of Hæmorrhage from the Placental Site (placenta prævia and accidental hæmorrhage) in the later months of pregnancy.
4. Infant Mortality in the first four weeks of life. (Jointly with X., 5, and XVIII., I.)

Section IX.—Ophthalmology.

1. The Pathogenesis of Chronic Uveitis, excluding the Syphilitic, Tuberculous and Sympathetic Varieties.
2. Glaucoma Operations with special reference to the comparative results attained by Iridectomy and its recent substitutes.
3. Affections of the Eye produced by undue exposure to light.
4. Anaphylaxis in its relation to Ophthalmology.
5. "Demonstration" Meeting or a discussion upon a subject not yet determined.

Section X.—Diseases of Children.

1. Infection of the Urinary Tract with Colon Bacilli. (On a different day from XIV., 3.)
2. Effects of the Ductless Glands on Development. (On a different day from II., 1, and VI., 1.)
3. Treatment of Tuberculosis in Childhood from the surgical point of view, with special reference to the bones, joints and glands On a different day from VII. (*a*), 5.
4. Polioencephalitis and Poliomyelitis.
5. Infant Mortality in the first four weeks of life. (Jointly with VIII., 4, and XVIII., 1.)

Section XI.—Neuropathology.

1. The Symptoms of Cerebellar Disease and their significance.
2. Motor Aphasia, Anarthria and Apraxia.
3. The Relation of Trauma to Degenerative Diseases of the Nervous System.
4. The Nature of the condition termed Parasyphilis. (On a different day from XII., 5.)

5. The Treatment of Tumors of the Brain, and the indications for operation. (Jointly with VII., 2.)

Section XII.—Psychiatry.

1. The Psychiatric Clinique, its aims (educational and therapeutic) and the results obtained in respect to promotion of recovery.
2. The Psychoses of Infection and Auto-intoxication.
3. Psycho-Analysis.
4. The Psychology of Crime. (Jointly with XIX., 4.)
5. The Syphilitic and the Para-Syphilitic Insanities. (On a different day from XI., 4.)

Section XIII.—Dermatology and Syphilography.

1. Epithelioma of the Skin, Benign and Malignant.
2. Syphilis: its Dangers to the Community, and the question of State Control. (Jointly with XIX., 3.)
3. Alopecia Areata and Allied Conditions.
4. The Treatment of Syphilis by Salvarsan and Allied Substances. (Jointly with XX., 7.)
5. The Vaccine Treatment of the Diseases of the Skin.

Section XIV.—Urology.

1. The Treatment of Early Renal and Vesical Tuberculosis. (Jointly with VII., 4.)
2. The Early Diagnosis and Treatment of Malignant Disease of the Prostate.
3. The Value of Vaccines in the Treatment of Hæmic Infections of the Urinary Tract.

Section XV.—Rhinology and Laryngology.

1. The Disorders and Pathological Changes produced in the pharynx and larynx by the over-use and mis-use of the voice.
2. The Treatment of Syphilitic Diseases of the Throat, Nose and Ear, by Salvarsan and other arsenical compounds. (Jointly with XVI., 2.)
3. The Question of Treatment of Diseases of the Throat and Nose by therapeutic inoculation, exclusive of Tuberculin and Diphtheritic Antitoxin.
4. The Special Treatment of the Throat, Nose and Ear, during the active stages of certain infectious fevers,

namely, scarlet fever, measles, German measles, mumps, influenza, typhoid, whooping cough, smallpox, cerebro-spinal meningitis, erysipelas (diphtheria excluded). (Combined with XV., 4.)

5. Malignant Disease of the Post-cricoid Region.

Section XVI.—Otology.

1. Pathology of Deaf-Mutism.
2. The Treatment of Syphilitic Diseases of the Throat, Nose and Ear by Salvarsan and other arsenical compounds. (Jointly with XV., 2.)
3. Treatment of Non-suppurative Diseases of the Labyrinth.
4. The Special Treatment of the Throat, Nose and Ear, during the active stages of certain infectious fevers, namely, scarlet fever, measles, German measles, mumps, influenza, typhoid, whooping cough, smallpox, cerebro-spinal meningitis, erysipelas (diphtheria excluded.) (Jointly with XVI., 4.)
5. Climatic and Occupational Influences in Diseases of the Ear.

Section XVII.—Stomatology.

1. The Pathology and Treatment of Periodontal Disease. (Pyorrhœa Alveolaris.)
2. The Relation of Nasal Obstruction to Dental Disease.
3. A Discussion on Reflex and Functional Disturbances in connection with Teeth.
4. Dental Diseases in relation to Public Health.
5. The Supervision of the Health of Children between Infancy and School Age. (Jointly with XVIII., 3.)

Section XVIII.—Hygiene and Preventive Medicine.

1. Infant Mortality in the first four weeks of life. (Jointly with VIII., 4, and X., 5.)
2. The Causes, Prevention and Treatment of Visual Defects in School Children.
3. The Supervision of the Health of Children between Infancy and School Age. (Jointly with XVII., 5.)
4. (*a*) The Factors that determine the rise, spread and degree of severity of Epidemic Diseases.
   (*b*) Protective Inoculation in Acute Infectious Diseases.
5. The Effects of Dust in producing Diseases of the Lungs.

Section XIX.—Forensic Medicine.

1. The Cause and Prevention of Suicide.
2. The Habitual Inebriate in relation to civil and criminal responsibility.
3. Syphilis: its Dangers to the Community and the question of State Control. (Jointly with XIII., 2.)
4. The Psychology of Crime. (Jointly with XII., 4.)
5. The Constitution and Equipment of a Medico-legal Institute.

Section XX.—Naval and Military Medicine.

1. Hospital Ships and Transport of Wounded.
2. Caisson Disease.
3. The Physiology of Physical Training and Marching.
4. Water Supplies in the Field.
5. Antityphoid Inoculation.
6. Transport of Wounded in Hill Warfare.
7. The Treatment of Syphilis by Salvarsan and Allied Substances. (Jointly with XIII., 4.)
8. Sanitary Organization in the Tropics. (Jointly with XXI., 5.)

Section XXI.—Tropical Medicine and Hygiene.

1. Relapsing Fevers.
2. Leishmaniasis.
3. Plague.
4. Beri-beri.
5. Sanitary Organization in the Tropics. (Jointly with Section XX., 8.)

Section XXII.—Radiology.

1. Rœntgen and Radium Therapy in Gynæcology. (Jointly with VIII., 2.)
2. The Radiotherapy of Malignant Disease.
3. The X-Ray Examination of the Chest.
4. The X-Ray Examination of the Abdomen.
5. The X-Ray Examination of Bones and Joints and its value in Orthopædic Surgery. (Jointly with VII. (*a*), 3.)

Notes

The nurses of New York have decided to raise their prices from four to five dollars per day.

The dates fixed for the next meeting of the Canadian Medical Association at Edmonton and Calgary are August 10-14. The Secretary announces that single fare rates on the Convention Certificate plan will be available to Edmonton from all parts of Canada.

A report of the Royal Commission on Vivisection as to experiments on animals, which have been adequately guarded in a legal manner is to the effect that they are morally justifiable and should not be prohibited. The investigations of the Commission have extended over a period of six years.

The next annual meeting of the Ontario Medical Association, as announced, will be held May 21, 22, 23, in Toronto. On the evening of May 20th the graduates of Trinity Medical College will hold a re-union banquet. Information as to the details will gladly be given to all inquirers by Dr. Samuel Johnston, 169 Carlton Street, Toronto, Secretary of the Committee.

Mr. W. J. Gage, of Toronto, has donated $60,000 for the building and equipment of a Sanitarium at Weston for the accommodation and treatment of children suffering from tuberculosis. This new building will be erected on the grounds of the Weston Sanitarium, and will in reality form a portion of that institution.

The Hebrews of Montreal started out February 18th to raise an annual subscription list of $25,000 in support of the New Mt. Sinai Sanitarium for consumptive Jews at Ste. Agathe. They did better than that, however, as they raised an annual subscription list of nearly $38,000 in four and one-half days.

The 18th Annual Meeting of the Royal Victoria Hospital, Montreal, was held January 23rd. It was decided to commence building an extension, which will provide for sixteen additional

rooms for private ward patients. Sir Edward Clouston, the President, promised to pay for the building of the extension and its equipment.

The Canadian Boy Scouts held their First Annual Convention in the City Hall, Toronto, February 23-24. Sir John Gibson, the Lieut.-Governor, and His Worship Mayor Geary delivered short addresses of welcome to the delegates in the Council Chamber. Dr. Hastings gave a lecture on Sanitation and Hygiene, and Lieut.-Col. Fotheringham delivered an address on Discipline.

At a special meeting of the County Council of Durham and Northumberland held in Cobourg, March 12th, the alternative clauses in the bequest of the late John Helm were considered. In the terms of Mr. Helm's will the sum of $112,000 was left to be used for hospital purposes. According to one clause the following amounts were left to different hospitals: $20,000 to Port Hope, $20,000 to Cobourg, $6,000 to the Toronto Sick Children's, $50,000 to the Toronto General and $6,000 to the Muskoka Free Hospital at Gravenhurst. According to the other clauses $100,000 was left to establish a hospital at Port Hope on the old Helm homestead. The choice of the alternative plans was left to the County Council. After a long discussion it was decided by a vote of 20 to 17 to accept the first proposition, which apportions the money between the five hospitals named.

Personals

Dr. G. Sterling Ryerson, founder of the Canadian Red Cross Society, has been appointed representative of the Canadian Government at the 9th International Red Cross Conference, to be held at Washington from May 7th to 17th.

Dr. W. W. Ogden of Toronto, left for Florida early in March.

Dr. A. E. McCulloch, of Toronto, has removed from 141 Farnham Avenue to 165 St. Clair Ave., West.

Dr. Forbes Godfrey, M.P.P., of Mimico, returned after a trip to the West Indies, February 9th.

Dr. S. H. McCoy, formerly of St. Catharines, has removed to Toronto, and is now living at 459 Avenue Road.

Drs. R. B. Nevitt and Fred Fenton of Toronto, visited New York in the early part of February.

Dr. Norman Walker, of Niagara Falls, left New York February 28th, to take the Mediterranean trip. He reached Naples, March 9th.

Dr. Vanderburgh, of Merritton was, in December last, appointed Surgeon to the County Jail in succession to Dr. Comfort of St. Catharines.

Dr. John Caven, of Toronto, is still in New Orleans and much improved in health. He expects to return to the City some time in April.

Dr. Arthur Jukes Johnson, who was confined to bed for a good part of February, through an attack of influenza has quite recovered.

Drs. A. B. LeMesurier and R. A. Jamieson, of Toronto, were both successful at the competitive examination held in February at the Bellevue Hospital, New York. As the result they will shortly go on the Bellevue Staff of House Surgeons, the appointment in each case being for two years.

At a banquet of the Kingston Board of Trade, in honor of the Honourable J. D. Hazen and Honourable Rodolphe Lemieux

Dr. Edward Ryan, President of the Board was Chairman, and Dr. A. E. Ross responded to the Toast of the Ontario Legislature.

Dr. Charles Sheard, Jr., who after graduating spent some time as Resident House Surgeon in Manhattan Hospital, New York, visited his relatives in Toronto in February. He left Toronto, March 2nd, for England. He will probably spend a couple of years in post-graduate work in Great Britain and on the Continent.

Dr. John Newton has had the honor of being Mayor of Deseronto for several years. He resigned at the last election, because he wanted the honor to go around. On the evening of March 7th, there was a large meeting in the Town Hall when Dr. Newton was presented with an engrossed address and a purse of gold by the citizens.

Dr. J. H. Radford resigned his position as Chairman of the Water Commission of Galt, March 6th. Dr. Radford was Chairman of this Commission for several years, and his success in bringing the service up to a high standard was very highly appreciated, and his resignation was accepted with much regret.

At the meeting of the Waterloo County Medical Association held in Berlin, February 27th, the following officers were elected: President, Dr. D. J. Minchin, Berlin; First Vice-President, Dr. C. T. Noecker, Waterloo; Secretary, Dr. J. E. Hett, Berlin; Treasurer, Dr. T. H. Kalbfleisch, Berlin. Dr. A. J. Mackenzie, Toronto, read a paper on "Infantile Paralysis."

Book Reviews.

Diseases of the Ear, Nose and Throat, Medical and Surgical. By Wendell Christopher Phillips, M.D., Professor of Otology, New York Post-Graduate Medical School and Hospital; Surgeon to the Manhattan Eye, Ear and Throat Hospital; Fellow of the American Laryngological, Rhinological and Otological Society; Fellow of the American Otological Society; Fellow of the American Academy of Ophthalmology and Otolaryngology; Attending Otologist to the Post-Graduate Hospital and Babies' Wards; President of the Medical Society of the State of New York, etc. Illustrated with 545 half-tone and other text engravings, many of them original, including 31 full-page plates, some in colors. Price, $6.00.

In this large and comprehensive work the author has placed before his readers the general features of these organs, together with the most modern and widely approved methods of treatment. The treatise is intended alike for the specialist and general practitioner, for while it wisely assumes the dignity of a text-book, its comprehensiveness and conciseness render it of value to both alike. The author's long connection with Manhattan Hospital and New York Post-Graduate School, as teacher and professor, have rendered him thoroughly familiar with these subjects; and, as a consequence, he speaks at first hand, basing his views very largely upon wide personal experience. To render the work additionally practical, he has avoided discussing old theories which, in the advancement of science, have been discarded, and old operations which have become obsolete. At the same time modern methods, which have not been generally tried by specialists, have failed to secure mention, the author placing before his readers as orthodox and acceptable the methods of investigation and treatment which in his personal experience have proved the most satisfactory. While the work covers a very extensive area, the author has devoted an entire section to the influences which general diseases and conditions, both acute and chronic, have upon the ear, nose and throat. The illustrations are admirably suited to the text. The duty assigned to the publishers, the F. A. Davis Co., of Philadelphia, has been well performed; and the book, as a whole, is a valuable addition to the large and rapidly growing literature which we have upon these very important subjects. P. B.

Medical Diagnosis. By W. Mitchell Stevens, M.D., M.R.C.P., Fellow of University College, London; University Scholar in Medicine (London); Senior Assistant Physician to the Cardiff Infirmary; Consulting Physician to the Royal Hamadryad Seamen's Hospital; Lecturer in Pharmacology in University College, Cardiff. With 177 illustrations. London: H. K. Lewis, 136 Gower Street.

For works on diagnosis the Canadian student and practitioner uses, as a rule, United States or German publications. It is refreshing therefore, to read a text-book of diagnosis by an English authority. We confess that we enjoy reading English medical books. As a rule one finds them written in a literary style which is often sadly lacking in so many of the works one reads.

The book before us is most complete, in fact if one were to criticize, it might be suggested that it should be condensed somewhat. The general examinations, examinations of special systems, differential diagnosis of the various conditions met with, are all dealt with most fully and completely. The illustrations are clear and well-chosen. It is a work to be studied with profit by both students and practitioners of medicine.

On Gastroscopy: With a description of a new, easy and efficient method of Oesophago-Gastroscopy, combining direct and indirect vision; and a plea for its employment by Gastric Experts. By William Hill, B.Sc., M.D., Lond., Surgeon for Diseases of the Throat, Nose and Ear, St. Mary's Hospital, London; Vice-President of the Laryngological Section of the Royal Society of Medicine, and formerly Vice-President of the Otological Section of the British Medical Association; Corresponding Member of the French Laryngological, Rhinological and Otological Society. With 47 illustrations, London: John Bale, Sons and Danielsson, Ltd., Oxford House, 1912.

This small monograph gives one a very good insight into the technique of gastroscopy and what findings one may expect from its use. The author advocates a method of his own as being safer than the older methods, but nevertheless requiring much experience on the cadaver to master the technique. The use of the instrument, of course, should be only in the hands

of most experienced operators, when, properly interpreted, the conditions found may be often invaluable in the diagnosis of gastric disorders.

Medical Gymnastics and Massage, for the treatment of Disease, Deformity and Injury. By Fred. F. Middleweek, L.R.C.P., L.R.C.S., Ed., Director of Mechano-Therapeutics and Massage, West End Hospital for Nervous Diseases.

With an Introduction by Dr. J. Arvedson, Stockholm. London; John Bale, Sons, and Danielsson, Ltd., 83-91, Great Titchfield St., Oxford St. W., 1912.

In this age of Osteopathists, Chiropractors and what not, the physician will do well to devote some attention to mechano-therapeutics. There is no doubt that in many cases the profession is to blame for patients consulting these faddists. This little book contains directions for carrying out the proper exercises required for various disorders. We are sure that all who read it will be able to think of cases in their own practices where the suggestions outlined here could be put into effect with good results.

Progressive Medicine.—A quarterly digest of advances, discoveries and improvements in the medical and surgical sciences, edited by Hobart Amory Hare, M.D., Prof. of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, physician to the Jefferson Medical College, etc., assisted by Leighton F. Appleman, M.D., instructor in Therapeutics, Jefferson Medical College, Philadelphia. Vol. 1, March, 1912. Lea and Febiger, Philadelphia and New York. Price $6.00 per annum.

The contents of this volume are up to the very high standards, established many years ago by the editor. They are: Surgery of the head, neck and thorax; infectious diseases, including acute rheumatism, croupous pneumonia and influenza; diseases of children; rhinology, laryngology and otology. In no other book, written in English, can we so quickly get a complete *resumé* of any subject relating to medicine as in Progressive Medicine. Each year brings improvements and this volume is better than ever. Nothing could be more satisfactory than Frazier's article on the surgery of the Brain. We again heartily commend this work to all medical men of scientific and inquiring mind.

Obituary

WILLIAM CAW, M.D.

Dr. William Caw, died at his home in Parkhill, Ont., December 17th, 1911. He graduated from Victoria University in 1864.

I. J. LANE, M.D.

Dr. I. J. Lane, of North Williamsburg, Ont., who graduated, M.D., from Queen's University, 1888 died December, 23rd, 1911.

EDWIN E. CAMPBELL, M.D.

Dr. Edwin E. Campbell, Jr., died at his home in Brockville, Ont., after a short illness with typhoid fever. He graduated M.D., from Syracuse University in 1909.

THOMAS C. SCHOFIELD, M.D.

Dr. Thomas C. Schofield died at the residence of his daughter, Mrs. St. Claire, 52 Avenue Road, Toronto, February 29th, aged 79. He had a stroke of apoplexy, January 17th, followed by paralysis. He was a graduate in Arts and Medicine of McGill University, and practised for many years in Bond Head and Thornhill.

JNO. W. WRIGHT, M.D.

Dr. Jno. W. Wright, one of the most prominent practitioners of the Bay of Quinte District died at his home in Picton, February 29th, after a week's illness with pneumonia, aged 58. He graduated B.A., from Albert College, Belleville, in 1875, and M.D., from McGill University in 1878. He became L.R.C.P., (Lond.) in 1879. He was a member of the Ontario Medical Council from 1881 to 1885.

He was an able and successful physician, and was highly respected by the inhabitants of Prince Edward and adjoining counties.

R. P. BOUCHER, M.D.

Dr. R. P. Boucher died at his residence, Peterboro, March 16th, aged 64. He graduated from Victoria University in 1869, and soon after commenced practice in Peterboro. During his professional work of forty-three years in that city, he was ever recognized as a skilful physician and also a public spirited man. He took a leading part in educational matters, public health matters, social functions and athletic sports. He was one of the most popular men in Central Ontario.

LORAN LESTER PALMER, M.D.

Dr. L. L. Palmer, a physician surgeon, well known in Toronto, died at his home in Grimsby, March 14th, aged 71. The cause of death is said to have been paralysis, following apoplexy. He graduated, M.D., from McGill in 1867, and practised for several years in Thorold. In 1881 he gave up general practice, and went abroad to study diseases of the eye, ear, nose and throat. He came to Toronto in 1882 and engaged in practice as a specialist. About two years ago he gave up practice, sold his property at 40 College Street, and removed to Grimsby. He took great interest in Military matters, and was for fourteen years surgeon of the Queen's Own Rifles.

JAMES CHALMERS CAMERON, M.D.

Dr. Cameron's many friends were painfully shocked when they heard March 16th, that he had died suddenly from apoplexy at 3 o'clock in the morning of that day, aged 60. He received his preliminary education at Upper Canada College, and his medical education at McGill, graduating in 1874. He at once commenced practice in Montreal, and very soon became known as an excellent obstetrician. He was appointed a member of the teaching staff at McGill, and on the retirement of Dr. Arthur Browne in 1886, was made full Professor of Obstetrics, which position he occupied up to the time of his death.

Miss Mary L. Dougherty, Assistant Superintendent of the Oshawa General Hospital, died March 5th, after an illness of a few weeks.

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See how admirably the Silent Waverley Electric Brougham fills the requirements of the City Doctor:—

IT TAKES the road immediately (no cranking), and is always ready for an emergency call.
IT STARTS and stops with the slight movement of a controller, no soiling or fatiguing of the hands and arms.
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See the Waverley at the Garage, Albert Street, or write for particulars.

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Selections.

A Well-Expressed Aspiration

May we keep our reverence unimpaired for the humble-minded and those who have suffered much, prays *Collier's Weekly;* our humor alert for our own mistakes and our self-sufficiency, and not at any time wreak it on the aged, the crippled, the obscure. May we guard childhood and honor age, however infirm and petulant, because it has gone a long way on the same road that bruises our feet; and ever seek to prolong the brief moment of joy as it visits children and lovers. May we have the grace to rejoice in the flow of life as it moves through men from generation to generation, and to be purified by the mystery in which we dwell—the night silences and the wonder of our inner life. May we look on the widespread spectacle of human suffering and, having endured to look on it, learn to know our single life—seemingly so unique—as a drop of that infinite sea. When it comes our time to realize that in this earthly progress we shall not long dwell with happiness or with success, may we clear our spirit of bitterness, and in calm strength continue at the work.

"Benefactors of Humanity"

The Baltimore *Sun,* under the heading "An Abhorrent Trust," says: "Despite the noble efforts of the League for Medical 'Freedom,' the abhorrent Medical Trust continues to grind the American people beneath its heel. Wooing the ear of Mr. Taft with its artful sophistries, it has lately induced him to issue an executive order requiring all medical practitioners in the Panama Canal Zone to obtain licenses from the local board of health, of which the notorious Gorgas, murderer of mosquitoes, is boss. What will be the effect of this order? Simply that only so-called 'regular' doctors—rascals who have studied four long years in a medical college and really know a staphylococcus from a peritoneum—in brief, members of the trust—will be able to practice. The gifted lady who cures leprosy by reading out of a book; the sturdy bone-setter, horny-handed but with a kind heart; the scorned discoverer of a sure specific for cancer; the Emmanuel Mover with his soothing voice—these great benefactors of humanity will be chased from the zone.

To the Physicians of Canada

The interest of the patient should be the first consideration; after that, Canadian doctors will consider their own, as well as the general interest, by supporting

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Fluid Extracts **Aseptaplasm**
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will never disappoint. They are standard and always reliable.

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is pure, true to label, the granule being uniform in size. Nineteen different Salts. Please send for list.

Aseptaplasm is an up-to-date scientific preparation and acts as a mild counter-irritant and exosmotic. In Pneumonia, Pleurisy, Bronchitis and Peritonitis it is especially valuable. Replaces the old Linseed Meal Poultices.

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"And not content with such vile consummations the Medical Trust pursues at home its campaign of inoculation and espionage. When the army was sent to the Mexican border last spring the hideous corpses of typhoid germs were introduced into the veins of 20,000 men. The mental healers of the United States, working voluntarily and at long distance, saved the poor fellows from immediate death. Not one of them, in truth, developed typhoid fever. But soon or late, as everyone knows, they will die of cancer, and if not of cancer, then of delirium tremens, and if not of delirium tremens, then of senile debility—helpless victims of a medical fad, of the sinister Medical Trust.

"Since then thousands of other Americans have been inoculated—the militiamen of Maryland, the paupers in Maryland asylums, multitudes in other states. The militiamen of New York are just now undergoing the torture; orders have been issued that every man in the Army and the Navy shall bare his arm. And meanwhile, the trust emissaries go snooping about the country, interfering with freedom in other ways. Here in Baltimore, for example, they invade the public schools and search for cases of pediculosis—an imaginary malady invented by the trust. And finding it, they proceed against it barbarously.

"It is to say all such horrors that the League for Medical 'Freedom' was organized. So far as we have seen, the trust prevails over it; but soon or late, if there is any virtue left in the world, it will enjoy its triumph and its glory."—*J.A.M.A.*

Should Medical Men Reveal Crime?

At the conclusion of a recent inquest at Napier, in New Zealand, the coroner is reported to have added the following rider to his verdict: "That where a medical man discovers such a state of things as may reasonably point to foul play to any human being, a responsible police officer should be the first person communicated with." The wording of this remarkable verdict is obscure, but we presume that the coroner gives it as his opinion that when a medical man in the course of his professional work becomes acquainted with certain facts which suggest foul play he should straightaway communicate those facts to a responsible police officer with a view to the supposed crime being investigated. The real duty of a medical man when placed under such circumstances has been a matter

"in the treatment of muscular cramps, hot applications according to S. Solis Cohen, lessen the excitability and energy of the voluntary muscles and relieve the excruciating pains accompanying these attacks.

In neuralgias as shown by Du Bois Raymond, where there is compression of the nerve trunk by the over filling of blood vessels in contiguous areas, hot applications relieve the congestion and pain by diversion of the blood to other parts.

In the use of hot moist heat as a therapeutic agent in the treatment of muscular spasms and neuralgias, antiphlogistine seems to be particularly indicated. It relieves muscular tension, stimulates capillary and arterial circulation, thus removing the congestion and its accompanying pain.

Antiphlogistine is the most convenient, sanitary and satisfactory method of applying hot moist heat. It retains its thermic value for hours, a feature of recognized importance in the treatment of inflammatory and congestive conditions."

of discussion in the past, but we think that it has been universally upheld that a medical man can never allow his professional secrecy to be overruled by any other consideration. No doubt the duty of an ordinary citizen would be to communicate at once to the police any information of which he might have become possessed bearing upon any supposed crime. He would do so as an ordinary citizen. But the medical man cannot dissociate his professional position from his citizenship, and his Hippocratic vow of secrecy must be maintained when matters of fact, and not matters of professional opinion, are sought from him.—*The Australasian Medical Gazette.*

Water Drinking at Meals

Amongst the many dogmatic assertions on dietary made by laymen, one of the commonest is that it is not good for one to drink water during meals. Some medical men seem to support this view. They point out that when food is taken in a relatively dry condition the secretion of saliva is stimulated; when, however, water is taken along with the food, it removes to some extent the necessity for the salivary secretion; the latter, therefore, is partly suppressed, with consequent ill-effects on carbo-hydrate digestion. Again, the ingestion of water necessarily dilutes the gastric and intestinal secretions, and, moreover, tends to wash out solid particles of food from the stomach before they have been sufficiently subjected to the action of the various ferments in that organ. These arguments, however, are essentially of an a *priori* nature, and as such probably contain certain fallacies, nor can they be accepted as warranting definite rules. The classical work of Pawlow on the digestive glands has shown that if the ingestion of water has any effect on the secretion of the gastro-intestinal juices, it is of a stimulating nature, and that mere dilution of the products of reaction has no detrimental influence on the processes of digestion. Professor Hawk, of the University of Illinois, has reported some experiments, the results of which point to the general conclusion that "during water ingestion with meals there is a better digestion and a more complete utilisation of the protein food, and that this effect is much less marked with a small water intake than with a large one." The conclusion of the whole matter, therefore, is that those individuals with a normal digestive apparatus need not deny themselves water at meals, but may allow appetite to decide the question.—*Medical Press.*

The Medical Press and Experiments with

BOVRIL

The report on the nutritive value of Bovril read before the annual meeting of the British Medical Association is attracting wide attention in the medical profession.

The "British Medical Journal" of September 16 devoted some six pages to a detailed account of the recent experiments, in which it was shown that **in the case of human beings the body-building power of Bovril was "even more marked"** than had been previously shown in the experiments with animals.

A further article has just appeared in the "Medical Times," and that journal points out that the experiments were originally conducted "with the object of ascertaining whether a certain beef extract (Bovril) supplied to the Government had any nutritive value or not. The results were simply startling."

"It was found that in all cases the administration of the extract (Bovril) caused an immediate increase in weight."

One important point brought out by these experiments is that this increase in weight is in tissue and muscle, and that **Bovril must therefore be regarded as a true nutrient.**

MARVEL "WHIRLING SPRAY" SYRINGE

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by reason of its peculiar construction, dilates and flushes the vaginal passage with a volume of whirling fluid, which smoothes out the folds and permits the injection to come in contact with its entire surface instantly dissolving and washing out all secretions and discharges.

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Miscellaneous

A Fine Line of Sterilized Solutions

Hermetically sealed glass ampoules containing sterilized solutions of important drugs for hypodermic use have assumed a commanding place in medicine in a comparatively short period of time. Two or three years ago, seeing the tendency in this direction, Parke, Davis & Co. brought out a modest line of something like a half-dozen formulas, notable among them being solutions of Adrenalin, Codrenin, and Cacodylate of Sodium. From this small beginning the line has expanded until now the company announces a total of about twenty distinct formulas. The full list, we understand, is now appearing in display advertisements in the leading medical journals of the country. Physicians who are interested in this advance in hypodermic medication—and every physician ought to be—will do well to search out these advertisements and familiarize themselves with the comprehensive line of solutions therein offered.

Solutions provided by the glaseptic ampoule, it is obvious, have several advantages over those prepared in the ordinary manner. They are ready for immediate use; there is no necessity to wait until water can be sterilized and cooled. Accuracy of dose is ensured, each ampoule containing a definite quantity of medicament. The solutions are aseptic; they are permanent.

Bromural in Psychiatry

A. Marie has prescribed bromural in paralysis, epilepsy, melancholia, degenerative mental diseases and dementia præcox. In paralysis, 3 to 6 or more tablets were required, and the effect lasted only a few hours or was interrupted by periods of excitation. The sedative action of bromural was exhibited best by the patients with the least serious affections. Even large doses were without effect in patients of the third stage of paralysis.

Patients with other mental disorders were much more susceptible and reacted even to 0.3 Gm. of the drug. An effect was evident usually in about 15 minutes. On awakening there was no feeling of lassitude and after-effects on part of the gastro-intestinal tract were never observed. In two patients with melancholia and one with degenerative mental trouble with

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Sir Charles A. Cameron, C.B., M.D. Professor of Chemistry, R.C.S.I., Medical Officer of Health for Dublin, City and County Analyst:

"This is an excellent Food, admirably adapted to the wants of infants and young persons, and being rich in phosphates and potash, is one of the greatest utility in supplying the bone-forming and other indispensable elements of food. Although peculiarly adapted to the wants of the young, this Food may be used with advantage by persons of all ages."

The Lancet:

"Characterized by an excellent, rich proportion of nitrogenous Food substances and of valuable mineral ingredients."

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A new preparation with a function quite distinct from the renowned Neave's Food for Infants. Has been introduced for those requiring a **Milk Food absolutely free from starch, for very young babies.** It may be given in conjunction with the breast, if the mother's supply is scanty or poor in quality, without the child being sick afterwards. It is instantly made by simply adding hot water. Neave's **Milk Food** should be followed by the ordinary Neave's Food for Infants directly it becomes advisable for the child to take something besides milk.

Report of Public Health Laboratories, London Hospital, Medical College, London, Eng.:

"This food contains in each 100 parts:—Fat, 26.0; Proteids, 20.0; Lactose, 47.1; Ash, 4.5 (of which 5 per cent. is phosphoric acid); Moisture, 2.4=100.0. When diluted with 7 to 8 parts of water the mixture would closely resemble human milk in composition. The fat would then be about 3 per cent. This is very satisfactory."

An M.D., M.R.C.P., London, Eng., writes: "Have prescribed your Milk Food frequently . . easily digested . . without any after acidity, which is common with Foods containing alkaline elements, and I shall recommend it further."

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angina pectoris, bromural seemed to remove to a certain extent the feeling of oppression.

In insomnia due to internal disease bromural in general does not induce an interrupted sleep. In elderly patients, however, partial rest at night will often suffice. In dementia præcox and juvenile forms of insanity, bromural was found to mitigate the katatonic attacks.

According to the author's own experiments, two tablets will hasten the onset of sleep. A general but indefinite lassitude will set in as after moderate bodily exertion. The sleep differs very little from the natural process, and on awakening there are no disturbances.—*Arch. int. de Neurologie, Merck's.*

Alcoholic inebriety was the title of an address delivered before the Winnebago County Medical Society by Dr. R. Broughton, medical director of the Dr. Broughton Sanitarium, of Rockford, Illinois. Some startling figures were given indicating the immense cost to the country of the use of alcohol. The prisons and asylums are full of inmates, a large majority of whom owe their downfall to alcohol. Dr. Broughton is well qualified, from his experience in the treatment of so many cases of alcoholism, to speak with authority. The practitioner will do well to consider the duty he owes to his patients in respect to the advice he gives them about the use of alcoholic beverages.

Critical Review of the Action of Fibrolysin on Cicatricial Tissue

Dr. Felix Mendel, who introduced Fibrolysin (the double salt of thiosinamine and sodium salicylate), reviews in "Merck's Archives" for January, 1912, the article by Dr. Sidorenko, in which the latter reported unfavorably upon this product. (*Deutsche Zeitschrift f. Chirurgie,* 110, Nos. 1-3.)

Sidorenko stated that "fibrolysin shows no therapeutic effect upon cicatricial tissue, and that his opinion is the result of clinical and experimental investigation, and the critical analysis of the material of other authors."

Mendel reviews this conclusion critically. He first shows why the experimental study of Sidorenko—because of the methods used—must be regarded as a failure.

Then he divides the cases in which fibrolysin has been reported to be effective into three groups:

(1) Those that might have healed spontaneously, such as softening of scars, adhesions, etc.;

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Science has proved dust is a favorite nesting place for disease germs.

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Standard Floor Dressing catches all dust the instant it settles on the floor and holds it there, together with the germs the dust contains. At the end of the day dust and germs are easily swept away without again rising and polluting the air.

The air is thus kept untainted. The spread of disease is checked at the outset.

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(2) Those that would probably have been improved as a result of mechanical treatment alone, but which are only cured if the hitherto useless therapy is augmented by fibrolysin injections—cases such as ankyloses and adhesions; and

(3) Conditions which are cured by fibrolysin despite the fact that according to our previous clinical experience they never heal spontaneously and are never improved or corrected by other methods of treatment, except surgical interference—(Dupuytren's contraction, keloids, myositis ossificans, etc.)

"It is just in this class of cases," Mendel concludes, "that a large number of well-authenticated cures are reported by private physicians, clinics, and large hospitals. There cannot be the slightest doubt as to the reliability of these reports. Even if we grant that there may be some doubt as to the action of fibrolysin in the first two groups of affections, the results obtained in the last group of hitherto incurable diseases give absolutely positive proof that fibrolysin is a drug exerting a specific action upon the scar tissue."

Many physicians have come to realize that caffeine, as daily consumed in coffee and tea, has much to do with the causation of many annoying ailments that formerly were obscurely diagnosed and vaguely treated. It stands to reason that this alkaloid, when taken in daily doses of six or more grains, must exert a harmful action on the nervous, circulatory and digestive systems. Its action must also modify the action of other drugs prescribed by the physicians.

Postum, the well-known cereal beverage, made of clean, hard wheat and a small per cent. of molasses, has been the means of effecting an easy change from coffee and its harmful stimulant—caffeine—to a wholesome, harmless, nourishing beverage.

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The Patient to the Doctors

Name me no names for my disease,
With uninforming breath;
I tell you I am none of these,
But homesick unto death,—

Homesick for hills that I had known,
For brooks that I had crossed,
Before I met this flesh and bone
And followed and was lost.

Perhaps it broke my heart at last,
But name no name of ills;
Say only, "Here is where he passed
Seeking again those hills."

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Original Communications

CHOLELITHIASIS

By Dr. W. J. Macdonald, St. Catharines, Ontario.

The first recorded instance of stones being removed from the gall-bladder of a living subject, was when away back in 1618 Johannes Fabricius is credited with success. There being no record whatever of the subsequent result; it is not known how long the patient lived. No record can be found of his method of procedure, and it is presumed he simply punctured a distended gall-bladder adherent to the abdominal wall.

The first name deserving of great credit in the early history of gall-bladder surgery is that of Petit. Of him it may be said that he formulated the principles, and established on a firm and scientific basis the surgery of the gall-bladder, which stood unchallenged for a full one hundred and fifty years, and would almost pass muster in the advanced surgery of the present day.

In 1733 he commenced an exhaustive series of studies on the surgical diseases of the liver, the gall-bladder and the bile ducts; and just ten years later, in 1743, he published the results of his investigations in several papers, which were far in advance of his time. With great foresight he discussed the symptoms and diagnosis of stone in the gall-bladder or ducts giving rise to biliary retention, and his description of the consequences of such retention was masterful indeed. He it was who first advocated the incision of the distended gall-bladder and the establishment of a biliary fistula, and he it was also who first described and advised the operation of crushing a stone, either in the gall-bladder or in the ducts, before attempting its removal. In 1859, a little over one hundred years after the ap-

pearance of the papers by Petit; Thudichum, in an able article, described a great improvement on the work of the former. He advocated abdominal section, suture of the gall-bladder to the abdominal wall, and then waiting several days for adhesions to form before opening the viscus. Petit, on the other hand, had advised waiting for adhesions to form before puncturing.

In 1867 Dr. Bobbs, of Indianapolis, performed the first operation of cholecystotomy on record. He performed abdominal section, incised the gall-bladder, removed a large number of stones, sutured securely the opening into the gall-bladder, and closed the abdominal incision. His patient recovered.

To Mr. Mayo Robson, formerly of Leeds, (now of London, England), belongs the credit more than to any other man, for the advancement in the technic, and the consequent brilliant results obtained in the gall-bladder surgery of to-day. As his contemporaries, the surgical world is also greatly indebted to such men as the late Lawson Tait, of Birmingham, and in more recent years to Kehr, to Moynihan, and to W. J. Mayo.

In the vast majority of cases, the conditions giving rise to the necessity for surgical interference with the gall-bladder or bile ducts, are superinduced by the presence of calculi. The various operations necessitated thereby may be conveniently grouped as follows:

(1) Cholecystotomy—The incision of the wall of the gall-bladder for any purpose. Should this incision be left patent for the purpose of drainage, the operation would be more correctly characterized as cholecystostomy.

(2) Cholecystectomy—The removal of the entire gall-bladder.

(3) Choledochotomy—The incision into any of the biliary ducts for the removal of stone.

(4) Cholecystenterostomy—The establishment of a permanent artificial fistula between the gall-bladder and some portion of the intestinal tract.

Cholelithiasis, with the numerous complications occasioned thereby, is the most frequent disease of the upper abdomen. It is four times as frequent as duodenal ulcer, it is eight times as common as ulcer of the stomach, and it presents itself at least ten times for every once we see cancer of the stomach.

I have some time since ceased to believe that the mere presence of stones in the gall-bladder may be productive of no

symptoms whatever. It is a common fallacy, a belief concurred in by many of our able men even to-day, that stones may lie quiescent in the gall-bladder for many years, or be even carried throughout life, without occasioning the slightest inconvenience. A stone in the gall-bladder is a foreign body, and the presence of any foreign body is certain to produce some symptoms denoting its presence. The fallacy of the belief that the first symptoms produced by the presence of gall-stones is when they commence to produce ulceration, inflammatory changes, infection, or obstruction to the biliary flow, has many times been demonstrated.

It is now the generally accepted opinion that he who is the possessor of one or more calculi in his biliary tract, is also subject to occasional attacks of "stomach trouble," and these irregular gastric inconveniences may be, and generally are, the only indication of the presence of biliary calculi. If this warning note were more frequently recognized, it would be the means of saving many invaluable lives. The first symptoms of early gall-stone disease are invariably referred to the stomach, symptoms which in nearly every instance will permit of a definite diagnosis being made, and thus, by early operation, avoid all the serious complications which later on are so liable to arise. Operation at this time is also followed by practically no mortality.

The gastric disturbances indicative of early gall-stone formation are frequently but slight, are scarcely considered by the patient, and oftentimes entirely overlooked by the physician. These are sudden and irregular attacks of fulness in the epigastric region, having no definite relation to the ingestion of food. The sensation may be even one of extreme tightness, which unless relieved by loosening the clothing may finally be productive of pain. Deep inspiration will frequently produce a pain in the region of the right costal margin. In a small percentage of these cases chilliness is occasionally observed after meals, the evening meal more particularly. The typical syndrome of symptoms of this early stage of gall-stone disease may be conveniently described as epigastric fulness, gas, and a sense of weight and upward pressure in the epigastrium, coming on from half an hour to an hour after meals. This condition may be very irregular, it may be present after every meal, or only after an occasional one. These "dyspeptic" attacks are usually of short duration, and should they be immediately and entirely relieved by belching, or upon vomiting, they may be considered as truly pathognomonic of early gall-stone disturbance, as the subsequent and more commonly recognized typical attacks of intense gall-stone colic.

The great majority of all operations performed on the gall-bladder or biliary ducts, are, for pathological conditions, the direct result of gall-stones. They are in most instances the common cause of empyema of the gall-bladder, gangrene of the gall-bladder walls, acute perforation of the viscus, cystic distention, due to block of the cystic duct, or if the hepatic or common duct should be similarly obstructed, the great distention of the gall-bladder will be accompanied by intermittent jaundice. Cystic distention, accompanied by permanent jaundice, will usually be found to be the result of cancer. This permanent jaundice is produced by the constant pressure on the duct. In 85 per cent. of all cases of cancer of the liver, the gall-bladder or biliary ducts, gall-stones are present.

Without obstructive symptoms, the presence of stones in the gall-bladder may be the cause of any degree of inflammation from a simple catarrhal condition up to the most virulent form of suppuration and necrosis. There is perhaps in all surgery no single exciting cause productive of more extensive and varied complications, than the presence of gall-stones. Many and varied are the conditions, frequently of an exceedingly serious nature, which demand operative interference. The chapter on the evolution of the surgery of the biliary passages rivals only in interest that of recent work on gastric and duodenal ulcers, with their manifold complications. The operative demand may be for any condition ranging from an ordinary catarrh of the bile passages, to acute phlegmonous cholecystitis and gangrene of the gall-bladder.

Cholelithiasis.—In the large majority of cases, gall stones cause but few symptoms, and throughout life they may be carried around with but very little inconvenience, mainly occasioned by irregular attacks of supposed indigestion. When, however, a stone leaves the bladder on its migration to the intestine, severe symptoms are produced, such as intense colic caused by its passage through the ducts, dilatation of the gall-bladder or acute cholecystitis, as a result of its impaction in the cystic duct; infective cholangitis and jaundice, should there be obstruction or semi-obstruction of the ductus choledochus. Furthermore the continued presence of a stone impacted in one of the ducts, is liable to lead to ulceration, terminating in perforation and a general peritonitis, should the perforation lead into the general abdominal cavity; or a permanent fistula, should it find its way into any part of the intestinal tract. Superficial fistulæ are known, where a gall-stone has suppurated its way through the anterior abdominal wall.

Symptoms: *Biliary Colic.*—Perhaps the most intense pain the human being may be called upon to suffer is occasionally produced by the passage of a stone through one of the biliary ducts. The passage of such a stone does not always cause such suffering, but in many cases the pain is truly great. It appears as a rule suddenly, without any warning, though occasionally prodromal symptoms may have been present. In many instances it disappears as suddenly as it commenced. Commencing in the right hypochondrium, it radiates to the right shoulder blade. In contradistinction to the pain produced by gastric or duodenal ulcer, this biliary colic has no relation whatever to the ingestion of food. This pain is often associated with chills, and a rise in temperature of from three to four degrees.

As in an acute attack of appendicitis, tenderness may be elicited over McBurney's point; so in biliary colic tenderness may be and usually is present in the region of the gall-bladder.

Vomiting, as a rule paroxysmal, is present at some time during the attack. It usually occurs toward the end of the seizure. In fact, it may be a determining feature in its cessation. In many instances the first sign of relief is experienced immediately after a severe vomiting spell. At first the ejected matter is ordinary stomach contents, to be followed by intensely bitter bile, if the common duct is free.

Cystic Duct Obstruction.—When a stone becomes so lodged in the cystic duct as to cause obstruction, there will be almost immediate dilatation of the gall-bladder. This may, in many instances, be of short duration, and the obstruction being removed, there will be an entire subsidence of the symptoms. In other cases, an acute suppurative cholecystitis may supervene, and relief be obtained only after surgical interference.

Empyema of the gall-bladder is a common accompaniment of gall-stones. When a stone becomes impacted in the cystic duct, the gall-bladder, as a result of the accumulation of secretions, may attain a very great size. The presence of micro-organisms will produce an infection, suppuration ensue, and the gall-bladder be converted into an abscess sac. Should adhesions be present, as is almost invariably the case in empyema, the organ will be fixed. In the absence of adhesions it may be quite freely movable.

Common Duct Obstruction.—A stone may become lodged in any part of the common duct. Should it be tightly wedged,

the jaundice will be deep and enduring. Should it be of the ball-valve type, the jaundice will be more intermittent and transient. A common location is the junction of the cystic and common ducts, where the stone rests partly in each canal. Another common location is the diverticulum of Vater. In common duct obstruction the gall-bladder rarely becomes enlarged, though the common and hepatic ducts may attain a very considerable size. The hepatic branches throughout the liver may also become greatly enlarged.

In infective cholangitis, from incomplete common duct obstruction by stone, the patient will suffer from intermittent but repeated attacks of chills, followed by an immediate rise in temperature. This febrile reaction usually reaches from 102 to 103 F. Pain is not a marked symptom. The chills may recur daily, or less frequently, and after each seizure the jaundice may deepen in intensity. Icterus may be intense. Nausea and vomiting are, as a general rule, a marked symptom. These attacks may recur at indefinite periods for years without the development of suppuration, until which time there is frequently no permanent loss of health. In attempting to ascertain the primary condition productive of the existing infective cholangitis, the condition of the gall-bladder is a valuable sign to go by. In practically all cases where the lodgment of a stone in the common duct is the primary cause, the gall-bladder will be found to be either normal in size or contracted. Should the occlusion of the common duct be the result of other causes, the gall-bladder will almost invariably be found to be considerably dilated.

In *suppurative cholangitis* we simply have the former condition in an intensified form. Suppuration may develop in any part of the biliary tract, and, spreading upwards through the hepatic ducts, develop focusses of infection with localized abscesses throughout the liver. Empyema of the gall-bladder is also a common accompaniment. In the suppurative condition the jaundice is not so intense, and after the attacks does not deepen so appreciably as it does in the infective condition. Suppurative cholangitis with secondary hepatic abscess formation is always fatal.

Operative interference is called for in almost every instance of complications caused by gall-stones. The indications for operating on the biliary tract may be summarized as follows:—

(1) In all cases of recurring biliary colic of a severe character, even though the general health of the patient may not be appreciably undermined.

(2) In enlargement of the gall-bladder, even if unaccompanied by great pain or jaundice.
(3) In recurrent attacks of jaundice, accompanied by pain, chills and fever.
(4) In all cases of acute suppuration in the gall-bladder.
(5) In peritonitis having as its focus of infection any portion of the biliary tract.
(6) In abscess formation with the focus in the right hypochondrium.
(7) In inflammation of the pancreas producing constriction of the common duct.

In all serious abdominal operations it is better to have the patient in a well equipped hospital, though of necessity it is frequently the case that the most serious of operations are performed in a private house, and oftentimes far in the country, from where it would be impossible to remove one who is extremely ill. When the patient is in the hospital where the surgeon is in the habit of operating, things are conveniently arranged, and everything runs smoothly. But in a serious abdominal case, where the conditions are such as to greatly jeopardize the chances of the patient by removal, there is no reason why a successful operation cannot be performed in their own home. A room with a good light, having been well cleaned the day before, and the door kept locked to prevent any dust entering, will answer admirably. The after-care of the patient may safely be left in the hands of the medical practitioner of to-day. This after-care is frequently of as much importance, and oftentimes of even more moment, than the successful performance of the operation. The Canadian physician of to-day, whether he be from the city or the most rural community, is, as a general rule, thoroughly equipped and competent to intelligently diagnose even the most obscure abdominal lesions, and if for lack of proper equipment, facilities, and practice in the particular technic so necessary to complete success, he does not undertake the actual operation itself, yet his after-treatment, of such vital importance to the patient, will, in practically every instance, be carried out along the most approved and accepted scientific lines.

In undertaking the performance of any serious abdominal operation, the operator should, in every case, have his mind free, that it may be fully concentrated on the work before him. For this reason a thoroughly competent anæsthetist should have

charge of this important part of the work. If a surgeon must continually divert his attention to see that the patient is taking the anæsthetic well, it will certainly mitigate against the performance of his best work. The operating surgeon is responsible for the life of his patient, and to feel that at the head of the table he has one in whose ability to administer a safe anæsthetic he has the utmost and implicit confidence, is at once a load lifted from his shoulders, and a greater guarantee for the successful conclusion of the work at hand.

In regard to instruments, the only special one I have found to be really necessary is a gall-stone scoop. The rest are simply those which would be used in any ordinary abdominal section.

No non-absorbable suture material, such as linen, silk, pagenstetcher thread, etc., should be used in the surgery of the gall-bladder or bile ducts. There are on record several cases where sutures of such non-absorbable material have formed the nucleus of more gall-stones. The most reliable suture material for such work as this will be cat-gut, either plain or chromic. This material, prepared by the iodine process, answers admirably.

For immediate preparation, the patient is cared for as would be the case in any other abdominal section. The bowels having been moved freely the day before, an enema is given on the evening previous to operation. Any cardiac stimulants which may be necessary are given at the discretion of the attending physician. In cases of jaundice it is always well to fortify oneself against hæmorrhage by previous timely doses of calcium chloride. In all cases of jaundice, whether it is from a diseased pancreas producing pressure against the common duct, or from gall-stones, there is a distinct tendency for the coagulability of the blood to become diminished, and consequent danger of serious hæmorrhage, either at or after operation. This is true to a greater extent in pancreatic disease than in obstruction due to gall-stones. Fifteen grain doses of chloride of calcium, given every three or four hours for three days prior to, and a couple of days succeeding, operation, will usually offset any serious danger from hæmorrhage. The routine practice of giving this drug in all cholaemic conditions should be rigidly adhered to.

Shock, one of the most frequent accompaniments to operation on the biliary tract, should be most sedulously guarded against. As these patients are often in a very weakened condition, any unduly prolonged operation is likely to have a serious effect. Some surgeons make it a practice to use a heated table,

while others envelop their patients in cotton wool to avoid exposure to cold.

The indications for the performance of a simple cholecystostomy may be enumerated as follows:—

(1) For the removal of stones from the gall-bladder when the cystic duct is patent, and there are no further complications.
(2) For the removal of stones from the cystic duct in the absence of ulceration or constriction of the duct itself.
(3) In chronic catarrh of the biliary tract.
(4 After the performance of choledochotomy for the removal of stones from the common duct, cholecystostomy should be done to provide for drainage.
(5) In ordinary suppuration in the gall-bladder, provided the walls are not seriously damaged.
(6) In distention of the gall-bladder from any cause, provided the cause can be removed, and there is no stricture of the cystic duct nor ulceration liable to lead to stricture.
(7) In cancer of the head of the pancreas where the patient is too ill to bear cholecystenterostomy.

The contra-indications may be thus classified:—

(1) In a greatly distended gall-bladder due to stone or other obstruction in the cystic duct, where there is constriction or ulceration in the duct liable to lead to stricture. In this case cholecystectomy is the better operation.
(2) In a shrunken and thickened gall-bladder the result of repeated attacks of cholelithiasis. In these cases, if the common duct is patent, cholecystectomy should be performed.
(3) In a permanent and irremovable stricture of the common duct, cholecystenterostomy is indicated.
(4) In gangrene of the gall-bladder, when cholecystectomy should be done.
(5) In the presence of cancer localized in the gall-bladder or cystic duct, cholecystectomy should always be performed.

Langenbach first proposed the complete removal of the gall-bladder, and in his first series of twelve cases had but two

deaths. His idea was to remove with the viscus the possibility of all future complications which may arise as the result of the presence of calculi in it. Many surgeons at the present time advocate the routine removal of the gall-bladder in all cases where operation is called for in the presence of gall-stones. Such excessive surgical zeal has been generally accredited to the surgeons on this side of the Atlantic, but I may say that in Canada as well as in the British Isles where great conservatism prevails, the viscus is only removed in the presence of definite and well defined indications.

When the bile which is being continually formed in the liver passes directly through the common duct, it is liable to find its way into the duct of the pancreas, and in doing so acts as an irritant, with the possibility of inducing chronic pancreatitis. This has been conclusively demonstrated by a long series of experiments conducted by Dr. Flexner. When, before passing through the common duct to become mixed with the semi-digested food in the duodenum, it has lain for some time in its natural reservoir, the gall-bladder, it passes through the duct in an entirely different condition to what it was when it originally left the liver. By a series of experiments conducted by Mayo Robson, he has shown that mucus is being continually secreted by the gall-bladder, his observations showing that an average of 72 C.C. are thus secreted in every twenty-four hours. These experiments would go to prove that the gall-bladder is not the useless organ some would have us believe, but rather serves at least one very definite purpose in thus causing the admixture of bile and mucus in such proportions as to greatly reduce the irritant action it otherwise would have.

If, as is the generally accepted opinion, the bile is only poured into the duodenum at certain intervals, and only in response to the stimulus produced by the passage of food through the pylorus, is it not reasonable to suppose that the common and hepatic ducts may dilate to form a reservoir made wanting by the removal of the natural one, the gall-bladder? In fact, there are several recorded instances where, subsequent to cholecystectomy, stones have been removed from an enormously dilated common duct. This fact would indicate still one more definite reason for retaining the gall-bladder wherever possible.

The definite indications for the complete removal of the gall-bladder may be thus enumerated:—

(1) In a shrunken and thickened gall-bladder the result of repeated attacks of cholelithiasis.

(2) In a greatly distended gall-bladder, due to stone or other obstruction in the cystic duct, where there is constriction or ulceration in the duct liable to lead to stricture.
(3) In malignancy, where the disease is confined to the gall-bladder or cystic duct.
(4) In gangrene of the gall-bladder.
(5) In suppuration in the gall-bladder when the walls have become seriously damaged.
(6) In mucous or biliary fistula when the common duct is patent.
(7) In stab or gunshot wound of the gall-bladder or cystic duct.

The main contra-indication to the operation of cholecystectomy is occlusion of the common duct. Should an irremovable common duct obstruction be present, either the cystic or common ducts must be short-circuited into the intestine, or the gall-bladder left in position.

The presence of stones in the common duct alone, is not of very frequent occurrence. Their presence here is usually associated with stones in the gall-bladder, and under these conditions are probably present in about fourteen per cent. of all cases of cholelithiasis.

The operation for the removal of stone from the common bile duct was first described by Langenbach, in 1884, and about the same time the first operation was performed by Kummell, whose patient though lived only twenty-four hours. The first successful choledochotomy on record was performed on January 22, 1890, by Courvoisier, who successfully repeated his performance on several occasions during the same winter. Since that time the technic has been rapidly perfected, until to-day the mortality rate, under best conditions, should not exceed five per cent.

Associated with common duct cholelithiasis are certain symptoms which may be almost regarded as classical. The gall-bladder will very infrequently be palpated, and in the great majority of instances will, at operation, be found in a very much shrunken and shrivelled condition. The most important, constant and suspicious symptom is jaundice, which, being rarely continuous, is usually associated with recurrent attacks of hepatic colic. Frequent occurrences of such attacks, even though they be mild in character, are indicative of stone in the common duct. Deep and continuous jaundice points to occlusion of the

duct from tumour, frequently cancer of the pancreas, rather than to stone.

The pain in common duct cholelithiasis is not so frequent in the region of the gall-bladder as deep in the epigastric, the lumbar or hypochondriac regions. In many instances the pain gradually increases in severity, culminating in a free attack of vomiting, following which there is usually more or less ease. A dull boring ache will, however, frequently last for some time longer. These paroxysms of pain are frequently accompanied by chills and fever, the so-called biliary fever of long ago, but this is of little diagnostic value as to the definite location of the stone.

The operation of anastomosing the gall-bladder to some portion of the intestinal tract, preferably the duodenum, occasionally becomes necessary. The main indication calling for its performance, an insuperable obstruction in the common bile duct, is fortunately of infrequent occurrence, as the surgery of the bile tract has to-day reached that stage of efficiency when all of the ordinary, and most of the extraordinary, causes of obstruction can be removed. The main pathological condition on which an insuperable common duct obstruction may supervene may be classified as follows:—

(1) The cause most frequently found at operation is chronic interstitial pancreatitis. This condition will sometimes produce almost complete occlusion of the pancreatic portion of the duct, which will sometimes not yield to cholecystostomy and drainage, hence the anastomosis must be made.

(2) In cancer of the head of the pancreas the same condition prevails. In the very earliest stages of the disease the operation should be performed, as it relieves the patient of a long period of chronic jaundice with the attendant discomfort and suffering. In the later stages the mortality rate is so appalling, and even if successful, the relief obtained is of such a transitory character, as to make its performance very ill-advised.

(3) In stricture of the common duct, the result of ulcer produced by gall-stones, an anastomosis may sometimes be necessary. A resection and end-to-end anastomosis of the duct under favorable conditions can be carried out, but usually the condition of the patient is so grave, and the technic is attended with such difficul-

ties as to make performance of cholecystenterostomy preferable.

(4) In gunshot or stab wound of the common duct, it may be necessary to ligature it and perform cholecystenterostomy.

(5) In the presence of a tumor in the duct itself, where resection and end-to-end anastomosis is not applicable, cholecystenterostomy should be the routine treatment.

(6) On March 2nd, 1889, Mayo Robson, then in Leeds, England, performed the first cholecystenterostomy for a biliary fistula. Two years previously a cholecystostomy had been performed for gall-stones, when, due to the presence of a stricture in the common duct, the track of the drainage tube never closed. This second operation was completely successful, and has since that time been performed on many occasions, in the presence of the same condition, with equally good results.

The diagnosis of cholelithiasis, with its many attendant complications, is oftentimes a most difficult matter indeed. It is often the mere presence of stones which requires to be diagnosed, but more often one of the manifold complications which are liable to be produced by their presence. The urgency of early diagnosis in gall-stone disease cannot be too strongly emphasized, and the necessity of having such foreign bodies removed before they produce any of the serious complications attendant on their presence cannot be over-estimated.

PERSONAL RECOLLECTIONS OF LORD LISTER *

By Dr. John Stewart, Halifax, N.S.

I thank you for the opportunity you have given me of joining my friends who have just spoken, in offering our tribute of love and reverence, and regret to the memory of our never-to-be-forgotten teacher and master. Circumstances prevent my being present with you in person, and my thanks are doubly due for your permission to contribute my share in this way. I understand that I am to speak of Lord Lister's work in London, and I must crave pardon if the first personal pronoun strikes your ears too frequently. One can scarcely recount reminiscences without it.

I shall try to give you some of the impressions and memories which remain with me of Lister's first year in King's College Hospital.

Owing to the death of Sir Wm. Ferguson, the Chair of Clinical Surgery in King's College became vacant. The celebrity of this illustrious surgeon had invested the chair with a proportional distinction, and in considering a successor the Governors turned their eyes toward Mr. Lister, whose reputation as a teacher and scientific surgeon and the originator of the antiseptic method had during the previous ten years become world wide. But with few exceptions, London surgeons were not converts to his views, and in Edinburgh we understood that there was a strong opposition to his being called to the chair. Ultimately those who wished to have him come prevailed, and at the close of the summer session of '77 he severed his connection with the University of Edinburgh.

It was of course quite evident that, in introducing his methods into a new hospital, he would require to have, at least during the first few months, assistants who had become familiar with the requirements of antiseptic surgery as then practised. He took with him Mr. (now Sir Watson Cheyne), myself, who had just graduated, and two juniors who had not yet completed their medical studies, one, my friend, Dr. Henry Dobie, now of Chester, son of Dr. W. Murray Dobie, whose researches on the structure of muscular fibre are known to all histologists, and the other, the late Dr. James Altham, of Penrith, whose

*Read at the Academy of Medicine, Toronto, April 2nd, 1912.

memory is a treasure to all who knew him, and who was the first, so far as I know, to resect a patella.

Why did Lister leave Edinburgh? As the apostle of a new surgical creed, had he not much more influence in a great school like that of Edinburgh than in any one of the London medical schools, to say nothing of one of the smallest? This is what, I suppose, all Edinburgh men felt. On the other hand, London is, simply London, the central point in all the world, with an immeasurable influence. And again, it seemed as though London offered the most strenuous opposition to Lister's theories. The determined opposition, the hostile criticism, and, it must be said, the unkind and scornful attitude of a few leaders of surgical opinion there, told heavily against the influence of Lister. Was it not natural that, with his conviction of the beneficent results of his methods, and his firm faith in its ultimate triumph, he, our "Herakles, battling with custom, prejudice, disease," should feel impelled to demonstrate its value to all who should come with open and unprejudiced minds, even "if envy scout, if ignorance deny" the truth he held? And, finally, it must have counted for something, London was home, and his mother still lived.

On the afternoon of October 1st, 1877, Lister delivered his introductory lecture at King's College. I regard it as a memorable historic occasion. The subject of the lecture was bacteriology; it was, perhaps, the first on the subject ever given in London, and as yet the science had not a name. The theme was the action of germs on milk and putrescible fluids, and he told of experiments he had carried on during the summer.

Cheyne and I called at his house early in the afternoon. We found him in his shirt sleeves, perspiring as usual, busy getting in order the exhibits for his lecture. Mrs. Lister was helping, also his nephew Mr. Godlee, now President of the Royal College of Surgeons, who had prepared some very beautiful colored drawings as illustrations. They were drawn on a large scale but they are to be seen I think, reduced, in the "Collected Papers." There was a large number of glasses and tubes, culture tubes we should call them, but that term had not arrived, some containing milk which had been acted on by various kinds of germs, and some which had been kept successfully from infection. These stood on plate glass slabs and were covered by small glass shades. We drove from his house to the lecture hall in Somerset House. We supported the trays and glasses as carefully as possible. They had been brought

successfully all the way from Edinburgh but were now in perilous passages, there were occasional awkward jolts and they sometimes rattled terribly. I made some remarks about "Cæsar and his fortunes" and I well remember his gentle, amused and somewhat pensive smile.

Lister was well received. The spacious lecture hall was crowded with an audience which contained not only many of the most distinguished physicians and surgeons of London, but some of the leading scientific men. For, although in his own "household" of the healing art Lister was still subject to much disparaging criticism, he had now for many years been a distinguished member of the Royal Society and of that inner circle of science in which the names of Darwin, Huxley, Tyndall, Hooker and Geikie shine.

Of the staff of King's I recollect with most distinctness the dark square face and piercing black eyes of one of his surgical colleagues, Prof. John Wood, who we supposed was hostile to Lister and resented his appointment to the chair to which he himself had looked forward; and the benign intellectual face and silver hair of Dr. George Johnson, the most distinguished physician on the staff, with whose theory of the vascular changes in Bright's Disease you are all familiar, and who was one of those who had been active in securing Lister's appointment.

This was a brilliant and most hopeful beginning of what we regarded as a campaign in the enemy's country. But, whatever Lister's own thoughts may have been, the next few weeks were to us of his staff the abomination of desolation. There seemed to be a colossal apathy, an inconceivable indifference to the light, which, to our minds, shone so brightly, a monstrous inertia to the force of new ideas.

We four unhappy men wandered about, now in the wards of King's, now through older and more famous hospitals, and wondered why men did not open their eyes. In these wards the air was heavy with the odor of suppuration, the shining eye and flushed cheek spoke eloquently of surgical fever. We would show them how things should be done! But how? We had no patients! We thought of the crowded hours of glorious work in Edinburgh, where Lister had half a dozen wards and sixty to seventy patients, and groaned over our two wards with capacity for a couple of dozen, but only empty beds. We remembered the enthusiasm about the introductory lecture of a session in Edinburgh, when the theatre would be crowded with four hundred eager listeners, and our hearts were chilled by the list-

less air of the twelve or twenty students who lounged in to lecture at King's. And when patients did come they were curiously unfit to demonstrate the advantages of the new system.

The first clinical lecture was to be on Monday, Oct. 8th, and up to Sunday, Cheyne and I had been unable to beg, borrow, or steal a suitable case. But one did turn up for the Monday lecture—alas! such a case. It came to us from France! A poor young Scotsman, a travelling tutor, had fallen ill in Paris, and some ingenious demon had managed to get him to King's in time to be the text of the first clinical lecture. He was the subject of spinal caries, and while it was indeed true that his treatment of psoas abscess was one of Lister's triumphs, you can scarcely wonder at our dismay when we found that this unfortunate man besides presenting two psoas abscesses, one on each side, was also the subject of pulmonary phthisis. The case was not a brilliant success. It is true that Lister could point to the fact that no rise in temperature followed the free opening and evacuation of the abscesses, but the poor man's constitution was too much undermined, there was no recuperative power, and after a few weeks he was sent home to Scotland. And we really had such a succession of uninteresting cases, that I think we were all depressed.

But brighter days came. On Oct. 26th, Lister operated for fracture of the patella, and this occasioned much comment, for it was a very daring thing to do—at that time. And this is what one of the brightest ornaments of London surgery said when he heard of it, said it to his students, too, "Now, when this poor fellow dies, it is proper that some one should proceed against *that man* for malpraxis!" And a few days later we admitted a young man who had been discharged from one of the leading hospitals as inoperable. He had a large tumor of the upper end of the femur, and it was supposed he had metastasis in the lungs. Neither Cheyne nor I could find evidence of this, but hospital etiquette required to have the medical examination made by one of the medical staff. This gentleman shook his head and looked more than dubious. I think he really did not wish Mr. Lister to tackle so doubtful looking a case. I have my doubts if Mr. Cheyne communicated these forebodings to the Chief. At any rate the limb was removed at the hip joint, not by any showy flap method, but by a careful dissection (Furneaux Jordan's method), and with most satisfactory results. And I think it was when this case was dressed at the clinic a few days later, and members of the hospital staff and students came into

the ward and saw a comfortable and happy patient with no rise of temperature and a normal pulse, reading the morning paper, and then saw the dressings removed and the large wound with no trace of inflammation and no pus, that their eyes were opened to the wonder of it all. At any rate next day Mr. Wood asked Mr. Lister to be with him and supervise the antiseptic precautions, while he removed a goitre. Wood was a masterly operator, but I suppose this was the first operation of the kind he had ever done in which the wound healed without any suppuration. It was a very pleasant thing to see how our dear Chief won the hearts of all who came into contact with him. Having mentioned Mr. Wood I may refer to another case. Ovariotomy, at that time was, taking the average statistics, one of the most fatal operations. Experience at King's had been so disastrous that the Governors had forbidden the staff to undertake it. But the impression made by Lister's cases led to a reconsideration of this rule, and special leave was given to Mr. Wood to undertake a case. Well do I remember the day. The patient had a small ward to herself. A carbolic spray had been kept going in it for hours, all night, I think, the atmosphere reeked with carbolic acid; the disciples, as is so often the case, thinking to improve on the master. I was present. The little ward was full of surgeons, many more than the staff of King's. Amid breathless silence, and in a veritable Scotch mist of carbolic vapor, John Wood advanced with an air of stern resolve. The incision was made, the cyst exposed, the trocar plunged in. In a few minutes the operation was over, so everyday a matter now. But men were as much impressed as we to-day are in presence of the gravest complication.

Was she to die like the rest? She was never even ill. She made a good recovery—and there was no prouder man in London than John Wood.

It was my privilege to assist in some of my Chief's operations in private practice, and as I look back to that eventful year I feel that I scarcely realized the great advantages and privileges I enjoyed. In the course of my work I met some of the most distinguished surgeons and teachers of the time. To have been introduced to Paget by Lister, is not that a memory to cherish? There are some curious and stirring memories associated with some of these operations in private practice.

I may relate a case. A young lady of good family was observed to be growing round shouldered. The principal of the school at which she was exhorted and rebuked in vain, calisthenics were persevered in, the girl was strong and healthy, but

growing crooked. The doctor was called in. He could find nothing wrong with the spine. There were sundry consultations, finally she was seen by Sir Prescott Hewett, President of the Royal College of Surgeons. It was evident there was a tumor growing from the ventral surface of the scapula, gradually pushing it away from the thorax. What was to be done? The greatest authority in Britain, if not in Europe, Sir James Paget, was then called in. He said he thought Mr. Lister should see the case. This was thirty-four years ago. It was not that any one shirked the anatomical difficulty of the operation. The scapula had been removed from time to time for seventy years. But men of the very highest skill and dexterity knew too well the risks involved in the healing of such a huge wound, and one leader in surgery at least, was so impressed by what he knew of Lister's methods, that he, in the fine spirit so characteristic of all he did, recommended a trial of antiseptic surgery. Lister cheerfully accepted the responsibility. The operation was done at the patient's home. The preparations were simple indeed, compared with the ritual of the modern operating room, with nickelled steel and plate-glass, but the essentials were there. Both Sir James Paget and Sir P. Hewett were present, and several other medical men. I had charge of the instruments. Lister made an incision along the spinal border of the scapula, severing the rhomboids. Then he passed his finger deeply between scapula and thorax, and explored. I saw his look of earnest concentration relax, and it was almost with a smile that he said, " The bone pliers, please." I handed the instrument; it followed the finger; there was a crunching sound, then the " lion forceps " was substituted for the bone-pliers, and with a few strokes of the knife the tumor was removed. The operation had been finished in a few seconds. The tumor was a pedunculated exostosis, the stem not thicker than a finger, which had, in its growth and pressure against the ribs, taken on the shape of an inverted cone.

I should like to record my impressions of Lister as a surgeon and as a teacher. It was said by some that he was not a good operator. Well, what is meant by a good operator? Operating is the smallest part of surgery. It is by the results we judge. Up to Lister's time no man had had such brilliant results. I think if we were the patients we should prefer a careful, painstaking, thoroughgoing surgeon to any one with ambitions for a spectacular exhibition to the gallery. There were men who could amputate a breast with two strokes of the

knife, and leave the wound to granulate. Lister might spend more than an hour, carefully removing it, clearing out the axilla, and bringing the edges of the incisions together. There is no one who hesitates as to who was doing the best operation. But I should be sorry to convey the impression that Lister was inexpert or hesitating in his manner. Where there was need for speed he was not lacking in this accomplishment of the surgeon. And all who are familiar with his plastic operations must have admired these. The bold, swift, unerring strokes of his incisions, the perfect apposition of the flaps, the provision against tension, gave him better results than I have ever seen elsewhere. In one thing more Lister was a truly great surgeon—he was of infinite resource. No unlooked-for accident, no complication found him unready. He was pathologist as well as surgeon. And yet one thing more: There is no man who remembers Lister's hospital work who was not impressed by his humane spirit, his tender regard for the mental and physical suffering of the poor who came under his care.

As a teacher Lister was peerless. His earnestness, enthusiasm, and energy, were contagious, and inspired "such love and faith as failure cannot quell." He made it his business to define and expound principles. His teaching at the bedside was invariably interesting and practical, and it had then all the novelty of a new-found world. His lectures were models of English speech in clearness and simplicity, and the musical voice in which he spoke made them a delight. Through all his teaching there ran a golden thread of high moral earnestness. I find in my journals occasional quotations which illustrate this attitude of his mind. Here is one. "To intrude an unskilled hand to such a piece of Divine mechanism as the human body, is indeed a fearful responsibility." And the practical bent of his mind is shown in this: "Act upon thoughts as they come and strike the iron while hot. If I have ever done anything it has been by acting upon thoughts as they occurred to me."

Lister was more than a great teacher, he was a great example. Of him, as of the great Duke, we may say, "Whatever record leap to light he never shall be shamed."

As dresser, clerk, and house surgeon, I came into close relations with this great man for several hours of almost every day during a total period of two years and a half, and I never heard him speak a word, or saw him act in any way which can now cloud a happy and blessed memory. It is impossible for me to

think of such a personality as having ceased to exist. Rather I cling to the thought in Matthew Arnold's noble poem:

"O strong soul, by what shore
Tarriest thou now? For that force,
Surely, has not been left vain.
Somewhere, surely, afar,
In the sounding labour-house vast
Of being, is practised that strength,
Zealous, beneficent, firm!"

Selected Articles.

SHOULD FEBRILE TUBERCULOSIS BE TREATED WITH TUBERCULIN?

By Louis Renon, M.D.,

Professor at the Paris Faculty of Medicine, Physician to the Necker Hospital.

Consequent upon the publicity given to researches in clinical therapeutics during the last three years, the employment of tuberculin is beginning to become more general in France. Practitioners are beginning to accord their confidence to this method of treatment, though they still experience some uncertainty in selecting cases for the treatment and in determining the precise indications therefor.

The question has been raised whether we ought to extend the tuberculin treatment to persons suffering from tuberculosis in presence of fever. Consequent upon the distribution of a pamphlet entitled "Tuberculinotherapy and the Beranek Tuberculin," stating that this remedy is an excellent antipyretic capable of bringing about the subsidence of temperatures of 102°, 103° F., provided the defences of the organism are still in a state to be stimulated by homœopathic doses, many physicians, despairing at seeing their patient's temperature resist the usual methods of treatment, have made use of tuberculin in these febrile tuberculous subjects. Many of them omitted to take the precaution to establish the exact balance of the other contra-indications. Serious mishaps followed in some instances, several of which have come under my notice. I have met with violent constitutional and local reactions, repeated attacks of hæmoptysis, with rapid generalization of the tuberculosis, and death in six or eight weeks.

Such cases naturally make one reflect very seriously, and in order not to throw discredit on an excellent method of treatment it is worth while going into this question of the treatment of febrile tuberculous patients with tuberculin. We will begin by rapidly reviewing schematically the mechanism of its action.

In contrast with serotherapy, which determines passive immunity, tuberculin provokes an active immunization of the

organism. In seropathy the anti-body is prepared by a foreign organism. The sick organism is not at the cost of its own defence, it need raise no army to be equipped and instructed in the struggle to be undertaken. It is provided, so to speak, with an army of mercenaries, trained and equipped in a foreign country. As the organism is at no trouble to prepare an anti-body, it is easy to understand why it is not exhausted. In tuberculinotherapy, where the immunization is active, matters are quite different, since the inoculation of the antigen is made into the sick organism itself. The whole burden of the process falls upon the latter, which is obliged to react in order to obtain immunity. This reaction takes place gradually, according to the progressively greater quantity of antigen introduced. The anti-tuberculin anti-bodies thus produced combat the tuberculous antigens which are constantly being produced in the organism by active tuberculous lesions. This determines a general anti-toxic effect, together with an unquestionable local action on the tuberculous foci, often followed by the foci becoming circumscribed and undergoing fibroid degeneration. This favorable transformation takes place more particularly under the influence of a local reaction, a local reaction which can hardly be avoided; indeed, which has its possible utility, but which is not aimed at and must be reduced to a minimum. In a course of properly conducted tuberculin treatment it should pass unnoticed.

In order to obtain a result with tuberculin, the organism must be in a state to react so that the subject must not be too exhausted, otherwise no anti-bodies will be formed, and the only outcome of the treatment would be to add a further quantity of antigen to that produced in the tuberculous foci. The organism thus finds itself saturated with a further quantity of tuberculin which may cause a rise of temperature with constitutional intoxication and anaphylactic hypersensitiveness, along with intense inflammatory reaction in the tuberculous foci, and, possibly, the formation of fresh foci. When the organism is unable to react it is easy to understand that, theoretically, seropathy is indicated rather than tuberculinotherapy, because serums bring their anti-bodies ready prepared to neutralize the injurious action of the antigens.

These preliminary considerations are indispensable to the proper consideration of the question I have raised—viz., as to the employment of tuberculin in febrile tuberculosis. In tuberculosis, apart from the hectic fever, there is a rise of temperature, due to constitutional intoxication and the multiplicity of tuberculous foci. Clinically it stands in direct relationship with the

gravity of the affection. The organism of the febrile tuberculous subject offers less resistance, reacts less readily, and *à priori* is likely to form less anti-bodies, either spontaneously or consequent upon the injection of a tuberculous antigen for therapeutical purposes. Theoretically, therefore, the tuberculin treatment would appear to be ill-suited to the febrile tuberculous subject. As a matter of fact, we meet with cases with fever which do well on tuberculinotherapy while others go to the bad. It is all a question of the comparative resistance of the organism. It would be of the greatest interest if we could measure this resistance biologically and scientifically. This would enable us to determine the precise moment at which the activity of the biological defence was about to yield and when tuberculin is no longer indicated. It would afford us certain clear unquestionable indications for treatment, and in respect of the quantity of tuberculin to be injected. Numerous and highly interesting trials have been made, but unfortunately the results so far are too uncertain and discordant, owing to the extreme difficulty of the *technique*.

It is the clinical data along with the information to be obtained by close examination of the patient by a practitioner who has had experience of tuberculinotherapy, that will decide the treatment and its conduct. I am of opinion that the presence of fever should greatly weigh with us in deciding what treatment to advise. For my own part, as I have never ceased to proclaim during the last three years, the principal practical indication for the use of tuberculin appears to me, first and foremost, to be the comparative apyrexia of the patient, whose evening rectal temperature should not exceed 37.8° C.*

The expression, "comparative," indicates clearly enough that I am not opposed to the treatment of patients with moderate temperatures—*i.e.*, under 37.8° C.; we may even venture on the treatment with a temperature of 38° C., but in such case it should be carried out in a sanatorium or hospital under the exclusive and constant surveillance of a practitioner accustomed to handle tuberculin, this is a *sine quâ non*. Otherwise, with a few exceptions, tuberculinotherapy in daily practice should be limited to frankly apyretic cases. "Most febrile tuberculous subjects," says Kuss, "are better without tuberculin." Acute cases, the

*The other indications of what I should call limited or restricted tuberculinotherapy are the following: Cases of tuberculosis of slow onset, at a period of at least two or three months after any hæmoptysis; cases of torpid tuberculosis that have already improved under treatment by fresh air, medicine, etc., and in which the local condition has remained unchanged for weeks or months. The contra-indications comprise: Febrile tuberculosis, hæmoptoic tuberculosis, rapidly progressing cases, and cases with cavern formation and hectic fever.

advanced progressive cases, tuberculosis accompanied by grave symptoms of intoxication with recent congestive or inflammatory foci, would be aggravated thereby, often to an irremediable extent. Tuberculin can only be employed in carefully observed cases in which the fever, though refractory, is not high, in which the process is not actively progressive though febrile, and in which the patient has retained sufficient vitality with a good hope of curability. Even in relatively favorable cases, considerable experience is required if we wish to use tuberculin as an antipyretic, and we must proceed with the greatest prudence, otherwise we shall be making straight for a catastrophe.

When, after ripe reflection, we have made up our mind to treat a case of sub-febrile tuberculosis with tuberculin, we must begin with infinitesimal doses, and this irrespective of the tuberculin we employ. In these cases I have made use of the "tuberculin for medical use of the Paris Pasteur Institute," beginning with a millionth of a milligramme, gradually and progressively raised to an eight hundred thousandth of a milligramme, to a five hundred thousandth of a milligramme, and so on until we have reached a two hundred thousandth of a milligramme, and that without any accident. The old tuberculins might possibly be more employed with advantage. In all countries there is a movement in favor of Koch's original "lymph," which seems to be more stable than tuberculins precipitated with alcohol. Dr. L. Guinard makes use of this at the Bligny Sanatorium, employing a product from the Institute Pasteur in the proportion of 0.25 gramme to the litre, and he tells me that he is quite satisfied with the effects of this solution, which is safer to handle than the precipitated tuberculins.

With a good tuberculin and proper care, seconded by some experience of the tuberculin treatment and incessant surveillance, the treatment of slightly febrile cases of tuberculosis (37.4° to 37.8° C.) may be undertaken without undue risk; but in general practice, to treat really febrile cases of the disease with tuberculin, without the requisite experience, is to expose the patients to serious dangers and possibly to create insurmountable obstacles to a successful treatment.—*Medical Press and Circular.*

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, F. A. CLARKSON, BREFNEY O'REILLY AND F. C. HARRISON.

Treatment of Diabetic Com

Blum (*Progrès Médical,* November 4th, 1911) says that an effective treatment of diabetic coma must realise three essential conditions—(1) neutralise the acids and promote their elimination, (2) help to the remineralisation of the system and to the establishment of the proper balance of the mineral constituents of the blood, (3) prevent the vaso-motor weakness which is common in all forms of coma. The food must contain neither albumin nor fat. One or two pints of milk may be taken as well as four or five ounces of glucose per diem; champagne or brandy freely; sodium bicarbonate, one or two drachms every two hours until the urine become alkaline; vaso-motor and cardiac stimulants (Ringer's solution with a little adrenalin). —*Medical Press.*

Hay Fever

The *Gazz. degli Osped.,* publishes a synthetic review of recent work in connection with hay fever. Not every case of nasal catarrh in the early summer is hay fever. The real hay fever is comparatively rare, but can be definitely recognized by applying the pollantin test. It is said that those cases where asthmatic symptoms form the chief feature occur chiefly in mouth-breathers; on the other hand, most hay-fever patients speedily become mouth-breathers whether they were so before the attack or not. In addition to the immediate cause—that is, the pollen albumen—there is some predisposing cause, possibly a vasomotor weakness, an abnormal permeability of the mucosa or a neurosis. The pollen albumen may act directly as a heterogeneous type of abumen. Whether neurasthenia is a predisposing factor or an effect of hay fever may well be doubted. As to distribution, North America, England, and Germany seem to produce the most cases, and in the order named. Males are rather more affected than females, and the richer, rather than the

poorer classes of society. More than eighty official remedies have been used, and each has cured in some cases and equally failed to cure in others. Undoubted benefit has followed the use of the specific remedies—for example, pollantin, graminol or maltol. Cotton-wood nasal filters, various ointments—for example, bormalin, rhinoculin, etc.—are useful locally. Operative treatment, cauterization, etc., has not given very satisfactory results. The most recent of the surgical procedures is the resection or paralyzation of the ethmoidal nerve. Internal medication by antithyroidin has been found beneficial. Lastly, there is the climatic treatment—that is, the running away from the pollen areas—and going for a sea voyage or to some island; Heligoland is suggested.

Lumbar Puncture in Typhoid Fever

In a case of typhoid fever accompanied with intense and persistent headache, the authors practised lumbar puncture. The first puncture confirmed the diagnosis of meningeal hypertension, but had no effect on the headache. A second, however, besides showing the presence of persisting, though lessened, hypertension, brought immediate and lasting relief. The authors are of the opinion that meningeal hypertension may be present in various acute infections without producing a definite group of symptoms pointing to the meninges, and urge, in view of the readiness with which lumbar puncture is now performed after a little practice, and its harmlessness, that this measure be availed of in infections when there are present evidences of meningeal hypertension, particularly violent and persisting headache, even when they occur as isolated symptoms, as in the case reported. Oddo and Monges (*Marseille médical*).—*Monthly Cyclopœdia.*

Late Reactions from Salvarsan

Ravaut (*Presse Médicale*) has noted remarkable changes in the cerebrospinal fluid of patients treated with salvarsan, varying from simple overtension with slight increase of albumin to a strong cellular reaction with lymphocytes, multinuclears, cells of the *Plasmazellen* type, great increase in albumin, and a positive Wassermann reaction. Death has resulted in vigorous subjects from sixty gramme doses of salvarsan. Ravaut has found that the remedy acts best in the primary stage, when initial lesions tend to heal rapidly; this is likely due to the

absence of involvement of the nervous system at this stage. He associates cyanide of mercury with salvarsan, and finds the combination very active and effective. In the secondary stage, particularly if the nervous system is in the least involved, salvarsan should be given with great caution, for a certain type of lesion will relapse and reappear in a more virulent form. In such cases Ravaut precedes the salvarsan by a course of mercury and gives his injections of the former at long intervals.—*N. Y. Med. Jour.*

The Haemorrhagic Diathesis in Thyroidism

R. Ehrstrom (*Finska Lækares ællskapets Handlingar*).—The hæmorrhagic diathesis is characterized by spontaneous hæmorrhages into the skin, mucous membranes, and internal organs, as well as by lowered coagulability of the blood. These two conditions have lately been traced to one and the same cause in cases of jaundice combined with the hæmorrhagic diathesis. Here both the hæmorrhage and its persistence are due to primary disease of the blood vessels which are responsible for the lack of thrombosin. But though closely allied these two manifestations may occur separately, one patient only exhibiting ecchymoses without provocation, and another suffering from hæmophilia alone. The hæmorrhagic diathesis may be purely constitutional or it may be provoked by poisons from without the body or from within, as in the case of jaundice, nephritis and various infectious diseases. Persons who bruise readily evidently exhibit a rudimentary form of the diathesis which is much commoner than is usually supposed, and which occurs most frequently in neurotic women. Such women notice bruises on their bodies every evening without being able to account for them, and it is probable that many of them are spontaneous. After collecting a number of such cases the writer observed that many of them, besides exhibiting more or less marked nervous symptoms, also suffered from thyroidism varying from typical exophthalmic goitre to slight abnormalities clearly traceable to thyroid disease. Out of 100 cases of thyroidism, between 60 and 70 exhibited this rudimentary hæmorrhagic diathesis. The writer's clinical observations are supported by the investigations of the coagulability of the blood of 37 patients suffering from thyroidism in Kocher's hospital. Here, it was found that the coagulability of the blood of 78 per cent. was diminished, and that the coagulum was abnormally loose. The coagul-

ability of the blood of two of these patients was found to be raised by an operation on the thyroid gland. The rate of coagulation was also found to be increased and the coagulum to be remarkably firm in cases of hypothyroidism. Further, the oral, subcutaneous or intravenous administration of thyroid extract to dogs and rabbits reduced the coagulability of their blood. The writer therefore claims that in the future the hæmorrhagic diathesis, whether well marked or rudimentary, should be included in the symptom-complex of thyroidism.—*The Medical Review.*

Experimental Nephritis

Hirsch and Maschke (*Berliner klinische Wochenschrift*), state that the problem of nephritis is its essential tendency to chronicity. There is only one nephritis, the interstitial, all other so-called inflammations representing parenchymatous degenerations. Thus parenchymatous nephritis must be interstitial nephritis plus parenchymatous degeneration. The authors have performed different sets of experiments intended to illuminate the nature of the nephropathies. The kidneys were extirpated from one rabbit, and after it had in consequence become uremic, its blood was transfused into a healthy rabbit. Thereupon there developed in the latter evidences of intense functional activity of the kidneys, as shown by the degree of hyperemia and amount of granulation in the renal cells. It was evident that the latter underwent a certain amount of degeneration from the formation of nephrolysins. The degeneration was attended by extravasation of blood. Again, as a result of innumerable punctures with a cautery needle the kidneys could be made to undergo contraction. The eyelets of intact renal tissue could be seen in the act of doing compensatory work. In this sort of kidney there was no notable degeneration of the parenchyma as a result of the overwork, such as was evident in the first series of experiments. In a third set of researches it was sought to determine whether or not the constant excretion by the kidneys of foreign albumin could set up nephritis. The results when egg albumin was absorbed from the peritoneum and then eliminated by the kidneys were negative throughout. The authors are still experimenting and expect to publish all their finds in detail.—*Medical Record.*

SURGERY

In charge of E. E. King, G. A. Bingham and C. B. Shuttleworth.

Severe Contractures of the Hands

Muhsam (R.). *Zentralblatt für Chirurgie.*

The author, after commenting on the failure of radiant heat, massage, and fibrolysin in these most intractable cases, advises treatment by resection of portions of the radius and ulna in their continuity, carried out on the lines which have often proved successful in the management of Volkmann's contracture.

The case which he reports is that of a girl who, in consequence of a severe whitlow of the palm and forearm, developed contracture of the fingers and wrist which crippled the hand completely, and would not yield to any of the ordinary methods of treatment.

A piece of bone, 3cm. long was removed from the radius and ulna, and it was then found that the wrist and fingers would extend freely. The divided bones healed well by the aid of a plaster of Paris splint, so arranged as to allow of movement and massage from the first.

The result, when seen fifteen months after the operation, was very satisfactory. The girl was able to move her wrist and fingers well and was able to do her work without any difficulty.—*The Medical Chronicle.*

Dupuytren's Contraction

Ebstein (W.). *Deutsches Arch. f. klin. Med.,* Leipzig, 1911.

Dupuytren described the contracture of the palmar fascia in 1832, affecting the fourth finger oftenest, less often the third and fifth, rarely the index, least often the thumb. He thought it due to the effect of repeated trauma on the palmar aponeurosis. But it has often been pointed out that constantly repeated injuries to the palm of the hand are of everyday occurrence in many trades, whereas Dupuytren's contracture is comparatively rare. So a second factor in its causation has been assumed—a constitutional or diathetic tendency to its

formation, such as gout, rheumatism, diabetes, lead poisoning, syphilis, nervous disease, heredity. Pribram (1902) assumes that it is due to a special "rheumatismus fibrosus." Ebstein cannot agree that gout or rheumatism and the other conditions mentioned have any but an accidental connection with Dupuytren's contracture; the theory that it is a trophic change, depending on syringomyelia, he rejects. He quotes cases in which the contracture appeared to be a hereditary deformity; the actual contracture of the fibrous tissue he attributes to a chronic inflammatory process, and he assumes that the palmar aponeurosis of these individuals is congenitally and hereditarily prone to such inflammation when exposed to the appropriate stimulus; König (1905) speaks of "a congenital disposition of the palmar aponeurosis to fibroma-formation."—*Medical Chronicle.*

Salvarsan

D. W. Montgomery, San Francisco (*Journal A. M. A.*, November, 18), says that salvarsan in its present form will never become a popular remedy, though it may be modified in the future so as to make it such. Few physicians rely on it to the exclusion of older specific remedies, and patients when told that it is not a sure cure invariably conclude that it is worthless. Another disadvantage in its use is the difficulties surrounding its administration. It cannot be taken by the mouth. It has to be prepared with minute care and given under the strictest antiseptic conditions. It is an irritant instead of an antiseptic and there is no telling when necrosis may be produced. It sometimes also accumulates in the system, causing delay by its non-absorption. The intravenous method is to be preferred, but this method is a surgical operation requiring more care than many more pretentious ones. The importance of getting a faultless solution, keeping adventitious particles out of it, the need of perfectly clean instruments, the numerous possibilities of miscarriage in one way or another, make it difficult. There is a temporary aggravation of the lesions, somewhat like those from tuberculin in tuberculosis, and this, in cases in which the lesions occupy important organs, is of the greatest importance. If the patient has gumma of the brain with severe pressure symptoms the sudden enlargement of this tumor consequent on the local reaction might easily be disastrous. For the same reason, if the patient has gummatous softening of an artery, giving rise to an acutely dilating aneurysm, a dose of salvarsan, by

increasing the quantity of blood sent to the part, may do irreparable harm. Of course, in case of a patient suffering from aneurysm intravenous injection should not be done, as the fluid itself would cause dangerous rise of arterial pressure. Lastly, salvarsan is not a remedy to be used in office practice or in ambulatory clinics. It should be done in a hospital, and the expense of this cannot always be borne by patients. Montgomery also mentions as possible though not serious disadvantages the effects on the nerves, especially on the ear, which seems to be more often affected than the eye. In estimating reports of these troubles, however, we must take into account the fact that those patients needing the treatment are those who are likely to have abused their nervous system by indulgences, carelessness and over-use of drugs. In conclusion Montgomery says that an enumeration of the disadvantages of this new drug serves only to throw into bolder relief its great advantages. The wonder grows that so powerful a remedy does so little harm.

OBSTETRICS AND GYNAECOLOGY

IN CHARGE OF ADAM H. WRIGHT, K. C. M'ILWRAITH, FRED. FENTON, AND HELEN MACMURCHY.

The Treatment of Puerperal Septicaemia by Bacterial Vaccines

This paper was based on a series of 100 cases of puerperal sepsis which had been investigated in the bacteriological laboratory of the London Hospital, 56 of which had been treated by vaccines.

After discussing the diagnosis of a "septicæmia" from the clinical and the bacteriological point of view, he expressed the opinion that we have included in the clinical term "puerperal fever" two different conditions.

1. A localised bacterial infection in the genital tract which is associated with more or less toxæmia.

2. A local infection in the genital tract from which bacteria are being carried into the blood stream continuously or discontinuously.

These latter cases constitute the true septicæmias, but he considered that there was no absolutely definite dividing line between the groups.

Tables giving details of the cases under discussion were in the hands of Fellows; he therefore proceeded to discuss the contents of these tables column by column.

1. *Nature of Labor.*—He pointed out that there did not appear to be an excess of primiparæ affected; also that there was a very large percentage of cases in which the third stage of labor had been incomplete or abnormal.

2. *Day of Onset.* In 62 per cent. the onset occurred on the second or third day.

3. *Rigors.*—No absolute prognostic significance can be attached to the presence or absence of rigors alone. It is probable, however, that a rigor is indicative of bacteria being thrown into the blood stream.

4. *Blood Cultures.*—These had been taken in 96 cases, and had given positive results in 40 per cent. He suggested that this percentage might be higher if the time of taking cultures

was chosen with due regard to the temperature curve. Of the 39 positive results, 36 grew streptococci, two grew staphylococcus aureus and one a Gram-negative coccus.

5. *Uterus Cultures.*—These were taken by a method similar to one which has been used by Menge and Krönig. A glass tube, with a rubber diaphragm at the top, is used as a shield through which a Pasteur pipette is passed into the uterus.

These cultures were taken in 43 cases. In 76 per cent. a streptococcus was grown in pure culture, These results were compared with those obtained by Foulerton and Bonney (Trans. Obstet. Soc. Lond., 1906, vol. xlvii., p. 11) and by Lea and Sidebotham (Proc. Roy. Soc. Med., Obstet. Section, 1909, vol. ii., p. 127), and concluded that the difference in the results obtained by different workers was due to differences in the *technique* employed. He considered the *technique* of the former good, but failed to see how trustworthy results could be obtained by the methods employed by the latter.

6. *Vaccines.*—He strongly advocated the use of autogenous vaccines in all cases in preference to "stock" vaccines, and pointed out that if a pure culture could be obtained from the uterus, much time could be saved, as an autogenous vaccine could be ready within 24 hours.

7. *Other Treatment.*—This included clearing out the uterus, opening abscesses, etc., and antistreptococcus serum. From this latter he had not observed any marked benefit.

8. *Results.*—After discussing the difficulty of obtaining a parallel series of control cases free from bias in either direction, he showed that the mortality amongst notified cases of puerperal septic diseases is about 58 per cent.

In the series of cases under discussion the mortality amongst 56 cases treated by vaccines was 32 per cent., while that amongst 44 cases in which no vaccines had been given was 55 per cent. Taking those cases only where there was definite bacteriological evidence of a blood infection, the mortality amongst those treated was 52 per cent., while that amongst untreated cases was 87.5 per cent.

Conclusions.

1. The mortality amongst those cases of puerperal septicæmia in which there is definite bacteriological evidence of bacteria in the blood stream is from 85 to 95 per cent.

2. This mortality may by inoculation with autogenous vaccines be reduced to about 55 per cent.

3. The mortality amongst notified cases of puerperal fever is about 60 per cent.

4. This mortality may by inoculation with appropriate vaccines be reduced to about 30 per cent.

5. In cases of puerperal sepsis, if it is decided to explore the uterine cavity, the opportunity of obtaining a culture at the same time should not be lost.

6. In the treatment of puerperal sepsis "stock" vaccines give inferior results, and should only be used when an autogenous vaccine cannot be obtained.—*The Med. Press.*

Editorials.

THE STREET RAILWAY AND THE MEDICAL PROFESSION

The very remarkable law suit of Albert Burnett and the Toronto Street Railway has caused considerable comment. Burnett, a detective, consulted Dr. A. H. Garratt, of Toronto, last October respecting injuries alleged to have been received by a fall from a street car. Burnett described in detail his sufferings, and was treated by the doctor in his surgery, and subsequently at the patient's house. Later the detective employed a lawyer and brought a suit against the Toronto Street Railway Company in the County Court. Dr. Garratt was subpoenaed to give evidence and describe his treatment of Burnett. Immediately afterwards the bogus plaintiff went into the witness box and swore that he had not been injured and demonstrated the fact that the lawsuit was a "hoax."

As we presume this matter is still *subjudice,* we offer no comment on the situation now. We are told by the *Toronto Saturday Night* that the injury done to Dr. Garratt by this action is not easily repaired. We desire in this connection to thank *Saturday Night* and certain other newspapers for their kindly attitude towards Dr. Garratt. We hope, however, we are in a position to say that little or no injury has been done to Dr. Garratt. His friends, both in the profession and out of the profession (and they are many), have full confidence in Dr. Garratt's honesty and integrity.

MISS CLARA BARTON

We cordially endorse the statement made by the *Toronto Globe,* April 16th, to the effect that Clara Barton is entitled to be regarded as one of the greatest of earth's heroines. She occupied in the United States a position somewhat similar to that of Florence Nightingale in Great Britain.

Miss Barton commenced her great work during the Civil War in the United States. After the close of the war she took a great interest in the Red Cross Movement, and after working some years she secured the assent of the United States Government to that clause in the Geneva Treaty, which guaranteed war privileges to all who wore the "Red Cross." She also organized the American Red Cross Society, which has done so much exceedingly good work in the relief of sufferers from epidemics and physical catastrophies She was honored by several Foreign Governments for work, which, in the language of the *Globe,* was "always humanitarian and quite often cosmopolitan."

PRIVATE HOSPITALS IN ONTARIO

At the last meeting of the Ontario Legislature an Act was passed relating to Hospitals and Charitable Institutions. This Act which is comprehensive in many ways is supposed to be a consolidation of pre-existing statutes dealing with this subject.

According to this Act all Private Hospitals (including Maternity Hospitals) must obtain a license from the Provincial Government. A fee of $5.00 will be charged, and thereafter a fee of $5.00 will be

annually collected. The applicant for such a license must submit a sworn statement respecting the objects of the hospital as to accommodation, equipment, sanitary arrangements, fire appliances, etc. Before the license is issued the Inspector of Hospitals must approve of the premises as suitable for the purposes set forth in the application.

THE MEDICAL HEALTH ACT

The new Medical Health Act has created considerable comment, most of which has been very favorable. The feature in the Act which has created the most interest is the division of the Province of Ontario into seven districts. In each of these districts there will be a supervising Medical Officer, who will be expected to devote his whole time working in the interests of the public health of the inhabitants of his district. Each of these district officers will receive a salary of $2,500 a year, and also payment of incidental expenses in the performance of his duties.

ONTARIO MEDICAL ACT

The proposed amendment to the Ontario Medical Act at the last session of the Ontario Legislature created considerable interest, chiefly on account of its recognition of what is called Osteopathy. The following clause shows the intention of the proposer, Dr. Jamieson: "Persons shall be entitled to practice any pathy or system which complies with the regulation of the College of Physicians and Surgeons of Ontario, and passes the examination prescribed by the College."

At the last conference of the Legislative Committee, under the Chairmanship of Dr. Jamieson, there were present a large number of Christian Scientists, about 30 Chiropractors and a number of Educationalists. After listening to all parties the Committee decided to table the Bill so far as Osteopathy was concerned.

The Legislature, however, passed the "enabling clause" giving effect to the Canada Medical Act or the "Roddick Bill," so far as the Province of Ontario is concerned. We understand that all the Provinces of Canada have now passed the necessary legislation to bring this Act into force.

THE WELLESLEY HOSPITAL

The new Wellesley Hospital, which is situated north of Wellesley Street, between Sherbourne and Jarvis Streets, Toronto, was opened April 30th, under the charge of Miss Elizabeth C. Flawes, Superintendent. Accommodation has been provided for about sixty patients. There is no regular visiting staff, and each patient will be attended by his or her own physician or surgeon. The hospital is open to all physicians in good standing, and surgeons who confine their practice to surgery.

SIMCOE HALL SANITARIUM

Dr. W. C. Barber, who has been in the Ontario Government service for the past twenty-three years, expects about the middle of May to open a Sanitarium or Hospital, in Barrie, for the care and treatment of Nervous and General Diseases. Simcoe Hall is beautifully situated on a height of land about 600 feet from Lake Simcoe. Dr. Barber was particularly

fortunate in securing a site which is so admirably suited for such an institution.

AMERICAN MEDICAL EDITORS' ASSOCIATION

The annual meeting of this society will be held at Atlantic City, N.J., on June 1-3, with headquarters at the Marlborough-Blenheim Hotel. Dr. Thos. L. Steadman, Editor of the *Medical Record,* will preside, and an attractive programme is being prepared. The annual banquet will be held on June 3rd. All editors and those otherwise associated in medical journalistic work are invited to attend.

LOCAL SANITARIA

As we have indicated in former issues there is a growing feeling in favor of the establishment of local sanitaria for the care of tuberculous patients in various parts of Ontario. It is hoped that before long such an institution will be established in every County in Ontario. Dr. Bruce-Smith tells us that the idea that a tuberculous sanitarium must be expensive is wrong. The main object of such a sanitarium is to supply pure air and nourishing food to the patients. A cheap building is just as good for such purposes as an expensive one. A frame building with wide verandahs and a few shacks comfortably furnished would be quite suitable for the needs of most counties. One hundred small local sanitaria in Ontario would serve the interest of the public much better than one, two or three large institutions situated in large cities. Many people cannot go long distances for treatment and therefore choose to remain at home unless they have a sanitarium near at hand. It should be remembered that local sanitaria properly conducted do not endanger the health of the community.

SEVENTEENTH INTERNATIONAL CONGRESS OF MEDICINE

LONDON, AUGUST 6TH—12TH, 1913.

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Section XXII.—Radiology—J. Mackenzie Davidson, M.B., C.M.

DRAFT OF THE PROGRAMME OF THE MEETING OF THE ONTARIO MEDICAL ASSOCIATION

To Be Held in Toronto on May 21st, 22nd and 23rd, 1912.

Tuesday, May 21.

11 a.m.—Symposium on Graves' Disease.

2 p.m.—Address in Medicine. Dr. William Aldren Turner, M.D., Edinburgh; F.R.C.P. (Lond.); Physician to and Lecturer on Neurology, King's College Hospital; Physician to the National Hospital for the Paralyzed and Epileptic, Queen Sq., London.

4.30 p.m.—Garden party at residence of President. (Evening Session in Physics Building, University).
8 p.m.—President's Address. Dr. Herbert A. Bruce, F.R.C.S. (Eng.).
9 p.m.—Illustrated Lecture on Experimental Medicine. Prof. Alexis Carrel, (Rockefeller Institute). Reception and refreshments.

Wednesday, May 22.

9 a.m.—Clinics at University Buildings.
1 p.m.—Luncheon in the Quadrangle.
2 p.m.—Address in Surgery. Dr. George W. Crile, Surgeon to Lakeside Hospital, Cleveland.
3 p.m.—Meeting of Sections.
7 p.m.—Annual dinner at McConkey's.

Thursday, May 23.

9 a.m.—Clinics at the various Hospitals.
2 p.m.—Woodbine races and golf.

Through the courtesy of the President and Directors of the Ontario Jockey Club, complimentary tickets will be provided for the members of the Association and their wives, for the races on Thursday afternoon.

The 12th Annual Meeting of the Canadian Association for the Prevention of Tuberculosis will be held in the Margaret Eaton Hall, Toronto, May 20-21. Dr. J. George Adami, of Montreal, is President, and Dr. Geo. D. Porter, of Toronto, Secretary.

Notes

We are told that the public schools of Philadelphia have been invaded by the fraternities, and the authorities are making an attempt to dislodge them. There has been much discussion in recent years about fraternities in the University of Toronto. It is supposed by some that they serve no useful purpose at best, and are apt to lead to a form of cliqueism which is objectionable. This may be true, but we doubt if any one has ever seen a class of boys or young men where cliqueism does not exist, and we can hardly see how it can be prevented.

In June the *American Journal of Surgery* will issue a number composed of original contributions from men of recognized prominence in the medical profession residing in Greater New York. Among those to contribute are: Herman J. Boldt, C. N. Dowd, Meddaugh Dunning, Wm. S. Gottheil, E. L. Keys, Jr., Howard Lilienthal, Charles H. May, Willy Meyer, Robt. T. Morris, S. Lewis Pilcher, John O. Polak, James P. Tuttle, James P. Warbasse, and others. Contributions from these well-known men should make this issue of particular interest and value.

Mr. W. J. Gage, of Toronto, has donated $60,000 for the purpose of building and equipping a hospital or sanitarium at Weston, where children suffering from tuberculosis will be cared for. Scores of little children are already being cared for in that admirable institution, the free hospital for consumptives, but the accommodation is entirely inadequate.

Dr. Wilfred Grenfell, who is fairly well-known in all parts of North America, has done grand work for the last twenty years in the wilds of Labrador. During this time he has travelled up and down the coast establishing hospitals for the sick and wounded, orphanages for the families of fishermen, who lost their lives in their precarious calling, co-operative stores to deliver the inhabitants from the burden of monopolies and land industries to broaden the basis of livelihood. The *Toronto News* tells us "There is much in his record to make Dr. Grenfell the ideal modern hero; of gentle extraction, educated at Oxford, he did not settle down in the world's metropolis, but chose the least attractive portion of the Empire in which to live out a life of genuine service." When he recently visited Toronto he received a hearty welcome. We know of no one visitor to Canada who is more highly respected by all classes of citizens than Dr. Grenfell.

Personals

Dr. G. R. McDonagh returned to Toronto, April 30th.

Dr. John Francis McConnell was married on April 11th, to Miss Edith Doris Fowler, of Colorado Springs, Colorado.

At last accounts Dr. John Caven was fairly well, and expected to return to Toronto early in May.

Dr. J. R. Robertson, of Stratford, sailed from New York for Antwerp, April 20th.

Dr. G. S. Ryerson has returned from Atlantic City, April 15th.

Dr. Chas. A. Hodgetts, Ottawa, paid two visits to Toronto in connection with health matters in April.

Dr. T. Alexander Davies, of 56 Wellesley Street, left this week for Berlin and Vienna. He intends taking a special course on the ear, nose and throat, and expects to return in October.

A Canadian Club was organized in Chicago, April 17th. Dr. Thomas A. Woodruff, formerly of St. Catharines, was elected President, and Drs. E. D. MacMartin, of Toronto, and T. O'Hagan, of Stratford, were placed on the Board of Directors.

Dr. J. T. Duncan, announces that being out of health he is obliged to cease the practice of his profession. He will therefore, leave his present office on April 30th, and intends to spend next winter in California.

Dr. W. Beattie Nesbitt graduated from the University of Toronto, B.A., in 1885, and M.B., in 1888. In his student days, and for some time after graduating he took a great interest in chemistry and allied subjects. He had a complete laboratory in his private residence, and spent many hours of each day, working in it. In a few years, however, he gave up the practice and study of medicine and science, and engaged in business, soon drifting into politics. About 5 months ago he left Canada on account of the Farmers' Bank troubles. His whereabouts were unknown until word came from Chicago, April 9th, that he was in Chicago.

Book Reviews.

Physiology. A Manual for Students and Practitioners. By A. E. Guenther, Ph.D., Professor of Physiology in the University of Nebraska, and Theodore C. Guenther, M.D., Attending Physician, Norwegian Hospital, Brooklyn, N.Y. New (2nd) edition, thoroughly revised. 12mo. 269 pages, illustrated. Cloth, $1.00 net. The Medical Epitome Series. Lea & Febiger, Publishers, Philadelphia and New York, 1912.

The very fact that this handy little volume has created a demand for another edition is a fair indication that it has accomplished the object for which it was intended. It is not a quiz-compend, but a short physiology, in which the latest information is told in a concise and interesting way—just the thing, in fact, that a general practitioner would like to have close at hand.

State Board Questions and Answers. By R. Max Goepp, M.D., Professor of Clinical Medicine at the Philadelphia Polyclinic. Second edition revised. Octavo volume of 715 pages. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, $4,00 net; half morocco, $5.50 net. W. B. Saunders Company, Philadelphia and London.

This is more than a compend; it contains good answers to real examination questions, and is therefore an excellent book for a student if properly used. It covers all the usual subjects of examination, junior and final.

The Prevention of Dental Caries and Oral Sepsis, being the Cartwright Prize Essay of the Royal College of Surgeons of England for 1906-1910, with some additions, by H. P. Pickerill, M.D., Ch.B., M.D.S., (Birm.), L.D.S., (Eng.), Professor of Dentistry and Director of the Dental School in the University of Otago. London: Bailliére, Tindall & Cox, 8 Henrietta St., Covent Garden, 1912.

The University of Otago is so far away in New Zealand that many of us have never heard of it before, yet if many more publications of this sort are turned out, it won't be long before American students will be journeying there for a post-graduate

course. Dr. Pickerill has embodied in this one volume a remarkable number of original experiments, and has drawn conclusions from them that seem warranted. The book is most intensely interesting from cover to cover, not only to dentists, but also to physicians who are face to face every day with the question of oral sepis.

W. B. Saunders Company have just issued a new (16th) edition of their Illustrated Catalogue which describes some forty new books and new editions published by them since the issuance of the former edition.

The books listed in this catalogue cover every subject of interest to the medical man. The descriptions and illustrations are such as to enable the reader to select easily just the book he wishes on any branch. It is really an index to correct medical literature—an index by which the practitioner, the surgeon, and the specialist can acquaint himself with what is new in the literature of his subject.

This edition also contains an illustration and description of Saunders' new building, now being erected on Washington Square, Philadelphia's new publishing centre.

Any physician wishing a copy of this handsome catalogue can obtain one free by addressing W. B. Saunders Company, 925 Walnut Street, Philadelphia.

International Clinics.—A Quarterly of illustrated clinical lectures, and especially prepared original articles, by leading members of the medical profession throughout the world. Edited by Henry W. Cattel, A.M., M.D., Philadelphia. Vol. I. Twenty-second series, 1912. Philadelphia and London. J. B. Lippincott Company, 1912.

This quarterly series is now so well known among the medical profession that it is really only necessary to give the table of contents. For nearly a quarter of a century, International Clinics has continued to put forth the very best in medicine, to keep its readers thoroughly up-to-date and to inspire them with higher and better things. This volume is like its predecessors in having many excellent articles on many interesting topics. Wolbarst writes on the fine-glass catheter test, when pus is in the urine; Taylor on the prevention and prophylaxis of venereal disease; Flexner on experimental

poliomyelitis, and Walsh describes the masks of diabetes. Altogether there are 21 articles on subjects of medical interest, and all of them good.

Text-Book of Ophthalmology in the form of Clinical Lectures. By Dr. Paul Roemer, Professor of Ophthalmology at Greifswald. Translated by Dr. Matthias Lankton Foster. 275 pages with one hundred and eighty-six illustrations in the text, and thirteen colored plates. Rebman Company, New York.

Dr. Roemer says, that this text-book is intended primarily for students. It is written in very readable language, and in a good form for both oculist and physician to derive a great deal of benefit by reading it. On account of its clinical descriptions, etc., it is of particular value for the study of differential diagnosis of the various diseases of the eye, by students. We must congratulate Dr. Foster on his having made the translation so clear that none of the value of the description is lost.

Such a good picture is given us of the normal appearance of each of the structures of the eye that one cannot fail to note any abnormality. It is our opinion that too little emphasis is usually laid on describing the various types of structure to be found in the normal eye in most text-books. Dr. Roemer cannot be found fault with in this regard.

The pathology of each disease is carefully gone into. The illustrations and colored plates are amongst the best we have seen. It is printed on unglazed paper, with good type, and altogether is a pleasant and valuable book to have.

The Treatment of Shortsight. By Professor J. Hirschberg, of Berlin. Translated by G. Lindsay Johnson, M.D., F.R.C.S., of Johannesburg, S. A., with twelve illustrations, and 120 pages. Published by Rebman Company, New York.

A translated copy of a lecture delivered by Dr. Hirschberg. It treats of the many clinical and pathological symptoms and conditions very exhaustively.

First, as regards refraction, we are instructed when to correct and when to partially correct the refractive error.

The complications of myopia, especially the higher degrees are dealt with in turn; those of the cornea, aqueous, lens, iris, choroid, as well as hæmorrhages, rise of tension, etc.

Very clear and explicit advice is given regarding the removal of the lens, also the method and complication. With regard to the treatment of myopia, everyone will agree with Prof. Hirschberg when he lays so much stress on the importance of carefully studying each individual case for its associate troubles, and its complications before defining our treatment.

Altogether Prof. Hirschberg has given us a very valuable addition to the literature of this important condition.

The book is published by Rebman Company, New York.

Microscopy, Bacteriology and Human Parasitology. By P. E. Archinard, A.M., M.D., Bacteriologist, Louisiana State Board of Health and City Board of Health, New Orleans. New (2nd) edition, thoroughly revised. 12mo, 267 pages, with 100 engravings and 6 plates. Cloth, $1.00, net. *The Medical Epitome Series.* Lea & Febiger, Publishers, Philadelphia and New York, 1912.

This member of a most useful series of text-books has been thoroughly revised and brought up-to-date with the numerous advances in bacteriology. Sections have been added to include some of the protozoa, which will further enhance its value to the student. The book does not claim to be anything more than a handbook to the subject, but this purpose it fulfils in a highly successful degree. To the student it will naturally appeal particularly, but will also be found useful to those who have to prepare elementary lectures or demonstrations on the subject.

The Treatment, Prevention, and Cure of Tuberculosis and Lupus, with Allyl Sulphide. By William C. Minchin, M.D., (Univ. Dublin), late Medical Officer to the Kells Union Hospital and Fever Hospital; late Consulting Sanitary Officer, Kells Union. London: Bailliere, Tindall and Cox, 8 Henrietta Street, Covent Garden, 1912.

In this small monograph, Dr. Minchin makes a plea for the use of Garlic and its preparations in the treatment of tuber-

culous affections. He quotes some very interesting cases to illustrate the efficacy of the method, which consists of the inhalation and internal administration of Allium Sativum. We would like to see comments on this treatment by some of our pulmonary specialists. Dr. Minchin makes out a very good case and we think the subject would be well worth investigating.

Diagnostic and Therapeutic Technic. A Manual of Practical Procedures Employed in Diagnosis and Treatment. By Albert S. Morrow, A.B., M.D., Adjunct Professor of Surgery in the New York Polyclinic; Attending Surgeon to the Workhouse Hospital, and to the New York City Home for the Aged and Infirm. With 815 illustrations, mostly original. Philadelphia and London, W. B. Saunders Company, 1911. Canadian Agents: J. F. Hartz Company, Toronto.

A long felt want is fulfilled by the book before us. Only too often it is taken for granted that the details of many of the methods used in diagnosis or therapeutics are quite familiar to the practitioner, and altogether too much is taken for granted or left to "common-sense." The result is, that the treatment loses half its value, through, perhaps, some apparently trivial error in technic.

Dr. Morrow has brought together a large number of most useful procedures and has explained the technic thoroughly. An idea of what the work covers may be gathered from the table of contents, which includes anæsthesia, local and general; sphygmomanometry, Bier's treatment, exploratory punctures, and the special examinations of the different systems. We regard this book as a most useful text-book, and of inestimable value, both to the student and practitioner of medicine.

Genito-Urinary Diseases and Syphilis. By Henry H. Morton, M.D., Clinical Professor of Genito-Urinary Diseases in the Long Island College Hospital; Genito-Urinary Surgeon to the Long Island and Kings County Hospitals, and the Polhemus Memorial Clinic. Illustrated with 158 Half-Tone and Photo-engravings and 7 Full-page Colored Plates. Second Edition, Revised and Enlarged, Royal Octavo, 500 pages. Bound in Extra Cloth. Price, $4.00, net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia, Pa.

The second edition which has now been published for some time is an advance on the first edition by reason of the fact that the treatment of these affections has materially advanced since the first edition and every advantage is taken of this advance. We feel, however, that an improvement would be made by omitting that part of the work dealing with Syphilis. The space given to Syphilis is by no means large enough to adequately deal with that vast subject and really it has no place here. The exceedingly valuable part on Genito-Urinary Diseases is quite sufficient to ensure a demand.

We have nothing but the highest commendation as a whole, and the treatments as advocated are always rational and never extreme.

Practical Cystoscopy and the Diagnosis of Surgical Diseases of the Kidneys and Urinary Bladder, By PAUL M. PILCHER, M.D., Consulting Surgeon to the Eastern Long Island Hospital. Octavo of 398 pages, with 233 illustrations; 29 in colors. Philadelphia and London: W. B. Saunders Company, 1911. Cloth $5.50, net. Canadian Agents, The J. F. Hartz Co., Ltd., Toronto.

The medical profession are either exceedingly avaricious with new ideas or exceedingly suspicious.

In reference to the use of the Cystoscope for instance; it has had to fight its way inch by inch and it is only during the last ten years that its use has become well recognized. The technic of using the Cystoscope is not hard to acquire and may be acquired by any one with a little time and application. Phantom bladders supply the preliminary education.

The Germans undoubtedly hold the van, but such works in English as Dr. Pilcher's, who places the matter in so admirable a form will become a leading text-book on Cystoscopy. He is exceedingly fair in his deductions and does not endeavor to convince one that it and it alone will reveal the cause of kidney and bladder trouble. He is perfectly correct when he says that after the technique has been mastered that it requires a man of considerable experience to interpret the findings, and it is as an aid to this interpretation that the volume before us stands out pre-eminently. The illustrations are admirable and the coloring not at all glaring, and very true to nature.

It is very difficult to produce bladder changes in colors, but certainly this volume compares very favorably with German works.

We can highly recommend this work to the practitioner and know that it will be to his advantage in dealing with obscure kidney and bladder affections.

The typography, illustrations and binding are all of the best.

Obituary

GEORGE B. MAXWELL, M.D.

Dr. Maxwell, a graduate of St. Thomas, Ont., and at one time a practitioner in Montreal, died in Porters, Texas, February 29th.

E. PEARSON JAMES, M.B.

Dr. E. P. James, of Galt, died suddenly in his office in that town, on the evening of March 27th. The immediate cause of death was not discovered. He graduated from the University of Toronto, in 1902.

ROBERT J. BUTTERFIELD, B.A., M.B.

Dr. R. J. Butterfield, a young graduate from the University of Toronto, died in London, England, April 19th. After graduating, he acted as a house surgeon in the Toronto General Hospital for about a year and then went to London, Eng., where he received the double qualification of M.R.C.S. and L.R.C.P. When he had about completed his post-graduate work in the Old Country he contracted typhoid fever, which caused his death.

JAMES DAVID THORBURN, M.B.

Dr. J. D. Thorburn, of Toronto, who was in poor health for some time, was spending a portion of the winter in Guelph. He was suddenly seized with a serious form of appendicitis, and underwent an operation on March 22nd; the appendix was gangrenous, and there was general peritonitis. He steadily grew worse during the next three days and died late on the evening of March 25th. He was a son of the late Dr. James Thorburn,

of Toronto. He received his medical education in the old Toronto School of Medicine, and graduated M.B. from the University of Toronto in 1887. After doing post-graduate work in London and Edinburgh for one year, he received the double qualification. He then devoted himself to diseases of the ear, nose and throat. He returned to Canada in 1890 and commenced practice in this specialty in Toronto. He soon acquired a large practice and was considered a very skilful operator. He had a bright, cheery manner, and was very popular among all classes of citizens.

JOHN WORDSWORTH CLEMESHA, M.D.

Dr. J.W. Clemesha, for many years one of the most prominent and most highly respected physicians in Central Ontario, died in Toronto, April 19th, aged 69. He took a portion of his medical course in New York, and graduated M.D. from the College of Physicians and Surgeons of that city, in 1866. The following year he spent at McGill University and graduated M.D. from that institution in 1867. Some weeks ago he contracted septicaemia from a wound in the hand. He underwent treatment at his home in Port Hope for two or three weeks and then was brought to a private hospital in Toronto. It was hoped for a time that he would recover, but his symptoms became alarming about April 10th, and from that time he went from bad to worse until death occurred.

ROBERT S. TRACEY, M.D.

Dr. Tracey, one of Belleville's best known physicians, died April 20th, after an extended illness, aged 76. He was born in Wales and came to Canada at an early age. He received his medical education at Queen's College, Kingston. He was in active practice in Belleville for forty years, and was for some time medical health officer of the city, chairman of the Board of Medical Education, surgeon lieut.-col. to the Forty-ninth Regiment, and surgeon to the Grand Trunk Railway.

Selections.

Iodipin in Cardiac and Arterial Disease

As a substitute for iodides, A. Gorbatow believes that iodipin is especially worthy of notice, since it can be used subcutaneously, and is therefore suitable for cases where the internal administration of the iodides is impractical or impossible. Among other advantages he mentions an improvement of the general condition, regulation of the bowels, better sleep and alleviation of pain. The author injects 25 per cent. iodipin daily without interruption for thirty days, but in smaller doses than are generally recommended. For arteriosclerosis, two such series of injections are given every year for two or three years. Good results from such treatment were also seen in angina pectoris and stenocardia, particularly where the vessels of the heart were affected. The histories of ten cases are given in full detail. They included severe cardiac lesions, usually complicated by arteriosclerosis. In the great majority of cases, no other drugs were ordered except occasionally a small dose of sodium bromide. Nitro-glycerine and amyl nitrite, particularly, were avoided. The results in all cases were excellent and much better than one is accustomed to see after the iodides.—*Wratschebnaja Gaseta, 1911.*

Radium in Lupus Vulgaris

A case of lupus vulgaris of more than thirty years' standing which has cleared up under radium treatment is cited by Madame Fabre (*Arch. d'electr, med.*). At the time of commencing treatment the whole of one cheek was strewn with ulcerated points from which a seropurulent fluid exuded. Various forms of medical treatment had already been tried without result, and a series of X-ray sittings had been equally unsatisfactory. During the first months of radium treatment, the radium, in an apparatus containing 6 cg. (activity 500,000), and screened by lead having a thickness of 3-10 mm., together with a layer of caoutchouc and four layers of tarlatan, was applied three times a week and was allowed to remain for a quarter of an hour on each focus. At the end of a month or three weeks a certain period was passed without sittings—a period of three weeks at first, and one of ten days in the later stages of the

cure. By such means the general redness quickly diminished and the lupus nodules were flattened. Six months after the first radium application the cure was complete and without cicatrix. The affected cheek was, indeed, slightly more red than the other, but its appearance was almost normal. The suppuration had disappeared after the first two months of treatment. Although the patient was one who had badly supported the X-rays, which had provoked swelling, with pain and a sensation of heat, the radium caused no particular irritation. The patient was 48 years of age, and the lupus patch first made its appearance at the age of 16 years.

Unguentum Adhaesivum

Dr. Dreuw, of Berlin, some time ago, gave a very good prescription for psoriasis:

℞ Salicylic acid.....10 grammes;
Chrysarobin,
Oil of birch (Swiss Pharmacopœia)..... āā 20 grammes;
Green soap,
Anhydrous wool fat ..... āā 25 grammes.
M.

From this salve Dr. Dreuw has produced a "sticky salve" (*Klebesalbe*), which he describes in the *Deutsche medizinische*

℞ Salicylic acid.....10 grammes;
Pyrogallol,
Coal tar saponine ..... āā 20 grammes;
Zinc oxide.....20 grammes;
Green soap
Anhydrous wool fat ..... āā 25 grammes.
M.

This salve has a grayish color, but the upper layer of it will soon become black, which shows that it absorbs oxygen intensively. The author asserts that it has an adhesive consistence which is not to be found in any other salve and will therefore well adhere to the skin upon application. The gray salve will soon color the skin black, which color can again be removed by the use of benzine. The salve will not irritate the skin.

This salve should be used in all chronic infiltrations of the skin, and the author asserts that its healing effects are very good. —*New York Medical Journal.*

Heart Cough

One of the early lessons in diagnosis which the writer received from his preceptor made an indelible impression. The patient had suffered for several years, intermittently, from a chronic cough, unattended with expectoration, but associated with considerable discomfort in the throat. She had been under the care of general physicians and throat specialists, so called, and had been treated with sedative medicaments of various kinds, inhalation, gargles, and even galvanocaustic applications —all without avail. Inspection of the pharynx showed a general, diffuse, dusky redness, with prominent follicles of deeper hue, sufficient to make a first year student, when asked for his opinion of the case, confident that in calling it chronic pharyngitis he could make no error. He was then asked to examine the larynx, which showed the same dull, diffuse redness, and modified his diagnosis accordingly to one of laryngopharyngitis. He was then told to examine the pulse and heart. The pulse was somewhat rapid and feeble. No murmur was detected on cardiac auscultation, but the sounds were weak, and it was demonstrated to him by percussion that the area of dullness was enlarged. The throat symptoms, he was then told, were secondary and would disappear without any local treatment when the weak and dilated heart was restored to proper function by rest, regulation of diet, and the use, if necessary, for a short time, of a few drops of tincture of digitalis daily.

Since then, an experience of thirty years has brought many other such cases under observation. Sometimes there is only muscular weakness, sometimes dilatation, sometimes valvular lesion, sometimes muscular degeneration. In some cases there are congestions in other regions—in the stomach, for example, giving rise to symptoms termed "indigestion," and liable to be mistaken for chronic gastritis; sometimes affecting the liver, sometimes affecting the kidneys. In not a few cases, however, the only congestion evidenced by symptoms or found upon examination is that of the air passages; thus there may be engorgement, not only of the throat, but also of the turbinate bodies, which last might likewise be falsely interpreted as a local affection.

To return to the case which furnishes the text for this brief sermon, the words in which the distinguished physician emphasized for his pupil on that occasion, the broad general lesson to be drawn—beyond the mere diagnosis of laryngo-

pharyngeal congestion secondary to cardiac enfeeblement as a cause of cough and similar symptoms—may be repeated as a lesson to other young men beginning the study or the practice of medicine: "Be a general physician or a specialist, as you may prefer, but whatever work you choose, do not be a one-eyed man."—*N. Y. Med. Journal.*

Not infrequently subacute inflammations of the fallopian tubes will be found to be of tuberculous origin.—*American Journal of Surgery.*

A mild degree of shock causes an increase in leucocytes; severe shock paralyzes the leucoblastic function.—*American Journal of Surgery.*

A pulsating tumor in the side may be an aneurism of the abdominal aorta although palpation fails to disclose its connection with the aorta.—*American Journal of Surgery.*

Before performing œsophagotomy for foreign body, make a final examination (radiographic or otherwise) to determine that the object has not slipped into the stomach.—*American Journal of Surgery.*

Persistent dyspareunia, with no other ascertainable cause, may often be found to lie in a chronic gonorrhœa of Skene's ducts.—*American Journal of Surgery.*

Strength From Food

depends, as physicians and nurses well know, **not** upon the amount of food eaten, but the amount the system is able to appropriate.

In cases of weakened digestion from acute or chronic disease—or from the daily use of indigestible or antagonistic combinations of food—the proper regime obviously is to

BUILD UP DIGESTIVE POWER

and interdict unwholesome dietetic combinations.

Many physicians, from careful experiment and observation, have come to recognize in the well-known food—

Grape-Nuts

a ready and effective means of accomplishing the above in a safe and agreeable manner.

In making Grape-Nuts, wheat and barley (malted) are ground into flour; mixed with pure artesian water, yeast and a "pinch" of salt; allowed to remain in a **warm** room until the **diastaste** and **yeast** have converted a large portion of the **starches** into **dextrin** and **sugar.** This mixture is then made into dough—moulded (by sanitary machinery) into huge loaves—baked, sliced (by machinery)—**again** baked until sterilized and rock-hard—then crushed into the golden granules of appetizing, wholesome food of the commercial packages.

Grape-Nuts scientifically solves the problem of how, in the quickest, surest manner, to obtain ***strength from food,*** under even the most adverse conditions.

The "Clinical Record," for Physicians' bedside use, will be sent on request to any Physician who has not yet received a copy, together with samples of Grape-Nuts, Postum and Post Toasties for personal and clinical examination.

Canadian Postum Cereal Company, Limited, Windsor, Ont.

Miscellaneous

Treatment of Pulmonary Tuberculosis with Formation of Artificial Pneumothorax

Klemperer (*Berlin klin. Woch.*) sums up his article on this subject as follows: The establishment and maintenance of an artificial pneumothorax is an undertaking of some magnitude, but when properly carried out is not especially severe or dangerous. It can never be considered in connection with early or mild cases, but need not be restricted to the most severe cases. Whenever the dietetic-physical treatment, and the sanatorium and climatic cures and the application of tuberculin have all failed to control the disease, which advances even if ever so slowly, we should think of the possibility of the artificial pneumothorax before it shall be too late. Experience with cases in which a permanent pleural exudate is replaced by gas, and with others in which hæmoptysis has furnished the indication, has shown that the best results are to be expected in a somewhat early stage, with symptoms of moderate severity.—*Medical Record.*

Amputations Without Scars, by Charles H. Duncan, M.D., New York City, is the title of a reprint which has just come to hand. The author has consulted during his investigations the firm of A. A. Marks, manufacturers of artificial limbs, knowing that as the largest manufacturers of artificial limbs in the world he would be able to gather from them a great deal of valuable material. The author discusses many points in regard to the treatment of amputations, which will be of great value to the surgeon, and which, if followed, should have beneficial results. Anyone interested may secure a copy of this reprint by writing to A. A. Marks, 701 Broadway, New York City, and mentioning this journal.

Hand Disinfection

From a study of the literature, it appears that alcohol disinfection of the hands and iodine disinfection of the operative field are the most promising measures as regards simplicity and efficiency that have been suggested in late years for securing the desired end—that is, approximate sterilization of the skin. The

EATON'S

SILENT Waverley ELECTRIC

MEDICAL MEN are INTERESTED
IN THE
Waverley Electric Brougham

See how admirably the Silent Waverley Electric Brougham fills the requirements of the City Doctor :—

IT TAKES the road immediately (no cranking), and is always ready for an emergency call.
IT STARTS and stops with the slight movement of a controller, no soiling or fatiguing of the hands and arms.
IT CANNOT freeze up, no matter how cold the day.
IT IS NOISELESS, odorless and most economical to operate.
CLOSED IN against the roughest weather, the operator has a full view ahead and complete command of the road.

The Silent Waverley Electric Four-passenger Brougham has the longest interior of any car of its type, 65 inches. It has two full-width seats, generously upholstered.

It is interesting to note that the makers of this car, the Waverley Company of Indianapolis, have had sixteen seasons of electric carriage building, and the 1912 car is the product of the accumulated experience of these years.

See the Waverley at the Garage, Albert Street, or write for particulars.

THE T. EATON Co LIMITED
TORONTO CANADA

alcohol should be 95 per cent., and the hands should be thoroughly dried before its application. In the use of tincture of iodine all washing of the operative field on the day of operation should be avoided, and in urgent cases it has been suggested that the iodine may be applied without previous cleansing. According to Küttner, irritation may be prevented if a freshly prepared 5-per-cent. tincture of iodine be employed and the remains of the coating removed with alcohol or ether after operation.—*Therapeutic Gazette.*

The question of a light, nourishing, easily digestible food, for those who require prompt help at the least cost of bodily energy, is well answered in Grape-Nuts and cream. This famous food still holds its place in a class by itself. Made of whole wheat and barley, it affords the tissue-building albumins and energy-making carbohydrates of those cereals—the latter largely dextrinized and further converted into soluble sugars, for prompt assimilation.

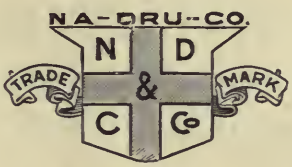
Patients who have not yet regained their normal appetites or digestive powers, are usually glad to avail themselves of the crisp, nutty granules of this clean, wholesome food and the thorough mastication required is, of itself, a big help back to healthy digestion and body nutrition.

Iodipin in Chronic Bronchitis

J. F. Early, of St. Louis, Mo., writing of the value of iodine as an antisyphilitic and alternative, states that in iodipin we have an efficient preparation and one free from the disadvantages of the usual iodides. The author points out the following advantages of iodipin for hypodermic use:

1. It does not corrode the needle.
2. Slow absorption, making for a more steady and constant physiological effect on the system.
3. Less irritating at site of injection.
4. Less painful after injection—a relief for which patients will be grateful.

It is, however, in chronic bronchial and asthmatic troubles that Early, (like Warfield), has found iodipin of greatest service. He cites the case of a patient 65 years of age who had suffered from chronic bronchitis for twenty years, and in whom



Physicians in the West, Notice

The "Made in Canada Train" will visit Manitoba, Saskatchewan and Alberta during the months of May and June.

This is a train of twelve standard baggage cars fitted with display samples of Canadian Made Goods.

The National Drug and Chemical Co.

the representative Chemical and Pharmaceutical House of Canada, will occupy space in this train.

Physicians in the West interested in chemical and pharmaceutical development in Canada should see our display. A case containing samples of

National Fluid Extract Ergot
National Fluid Extract Nux Vomica
National Fluid Extract Cascara Aromat
National Liquor Santal Flov Co.
National Elixir Digestivine
National Syrup Haemo-Hypophosphites

will be given to every doctor who calls.

Physicians will find Canadian Made Chemicals and Pharmaceuticals equal to any in the world, and some of them, especially **National Fluid Extracts,** superior to anything made.

NATIONAL DRUG AND CHEMICAL CO.
OF CANADA, LIMITED

Central Pharmaceutical Laboratory and Chemical Works, Montreal

the paroxysms of coughing had become so severe and of such duration that they caused a rupture. In the latter years the paroxysms had become asthmatic. Following the exhibition of a teaspoonful, four times a day of 10 per cent. iodipin, he has not had a single paroxysm, and in so brief a clinical period as a week he shows a remarkable improvement both in local and general condition.

New Sanitarium Head

Broughton Sanitarium will be continued under the management of Dr. George A. Weirick, who has been selected as head of the institution since the death of Dr. Russell Broughton, several days ago. Dr. Weirick has been first assistant to Dr. Broughton five years and during the illness of Dr. Broughton he was in charge six weeks.

Dr. Weirick is thoroughly acquainted with the policies of Dr. Broughton and he will carry on the work in the same able manner. He is an able physician. He was born at Princeton, Ill., in 1862. At the close of his education in the public schools he studied medicine in the state university of Ohio, which was followed by a course at Drake University, Des Moines, Ia., from where he was graduated. For sixteen years thereafter he practised medicine at Hastings, Neb.

Ideal Conditions of Serum Manufacture

If there is one therapeutic agent which, more than another, should be prepared with scrupulous care, that agent is diphtheria antitoxin. Its preparation should never be entrusted to the inexperienced or to those who are hampered by lack of facilities. It should have its origin in the blood of healthy horses—animals whose blood is known to be pure. The welfare of the diphtheritic patient demands a serum from which every element of conjecture is eliminated. In the opinion of many physicians these essentials are best exemplified in the Antidiphtheric Serum of Parke, Davis & Co. Certain it is that this antitoxin is manufactured under conditions that are ideal. Miles removed from the smoke and dust of Detroit, hundreds of feet above the river level, the company maintains a large stock farm, equipped with model stables and supervised by expert veterinarians. Here, in the best possible condition, are kept

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That antiphlogistine possesses particular merit, as acknowledged by professional preferment, as the most sanitary, satisfactory and adaptable method of utilizing the therapeutic value of hot moist heat in the treatment of inflammatory diseases is convincingly indicated by its increasing demand.

The value of antiphlogistine applied thick and hot in inflammatory diseases of the throat, chest, joints and other deep-seated structures, is not a theoretical figment but clinical fact.

Heat relaxes the white fibrous tissues that constitute the chief elements of ligaments and tendons and in spasms and muscular contractions, an application of antiphlogistine will relieve the tension and pain and afford comfort to the patient.

the horses employed in serum production. The laboratories in which the antitoxin is prepared, tested and made ready for the market are the admiration of scientific men who visit them.

Dr. Russell Broughton

Dr. Russell Broughton of Rockford, Ill., founder of the Sanitarium which bears his name, died at the institution on April 4th, after an illness of several weeks. He was 69 years of age. Dr. Broughton graduated from Rush College, Chicago, in 1869 and practised his profession for 21 years at his home in Brodhead, Wis. Then he became a specialist in the drug and liquor treatment and was connected with the Keeley Institute at Dwight, Ill., for ten years. In 1902 he founded the Sanitarium, an institution known from coast to coast, and where hundreds of people were helped to a better life. He was a man of splendid character and beloved by all who knew him, and the news of his death was the cause of great sorrow. He was buried at Brodhead, Wis.

What is Best in Tonics?

Many people, and perhaps a few physicians, are inclined to consider the terms "tonic" and "stimulant" as more or less synonymous and interchangeable. This, of course, is not the case, although some agents employed medicinally may partake of the properties of both and be properly known as "tono-stimulants." Strychnia, for instance, is a heart stimulant, but may also be considered as a general nerve and systemic tonic when given in small and frequently repeated doses. While a stimulant alone is sometimes indicated in conditions of emergency, its long continuance almost certainly produces an after depression. It is sometimes advisable, however, to give stimulant and tonic together in conditions of serious general depression, the first to "boost" the vitality and the second to hold it at the point to which it has been raised and to restore the general tone of the organism. An ideal combination of this nature is Pepto-Mangan (Gude) to which has been added the proper dose of strychnia, according to indications. This combination is especially serviceable in convalescence of exhaust-

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ing diseases such as Typhoid Fever, Pneumonia, La Grippe, etc. It is also of much value when the heart needs support and the general system requires upbuilding. Pepto-Mangan restores vitality to the blood by increasing the number of red cells and the percentage of hæmoglobin, and the strychnia assists in rendering the combination a peculiarly efficient general bracer and permanent reconstituent.

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Pulmonary Tuberculosis

Aufrecht (*Berl. klin. Wochenschr.*) discusses some neglected aspects of pulmonary tuberculosis. Cough, he points out, is not an early symptom in pulmonary tuberculosis; it is a complication rather than a symptom and may be absent when the tuberculous process is comparatively far advanced. It is merely the result of a laryngeal catarrh, that may or may not complicate the tuberculous process. Pus and mucus may remain for hours in the bronchi without causing cough. The cough itself produces a condition of strain in the tissues surrounding the tuberculous focus, leading to exudation into the alveoli, a condition conducive to a spread of the infection. Hence the treatment of the cough is an indispensable element in our care of the patient.

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The pleurisy, that so often complicates early pulmonary tuberculosis, is due to an embolic process, leading to an infarct of the lung tissue that extends to the surface of the lung, thereby involving the pleura and leading to an effusion. The origin of the embolus is usually to be sought in the vein leading from an infected mediastinal gland.—*Interstate Medical Journal.*

Hot Air in the Treatment of Ulcerations

Belot (*Arch. d'électr. mêd.*) describes a number of dermatological conditions in which a hyperæmic dose of hot air has at least accelerated cicatrization. The air is heated in a small apparatus by means of an electrical resistance, and is then directed outwards in the form of a jet, the pressure of which can be regulated at will. The direction of the air upon different points of the lesion must be tentative at first until the skin becomes accustomed to the temperature, and afterwards it must be concentrated on the parts most affected, so as to give the maximum heat which the patient will support. It is scarcely possible to get beyond 140 degrees to 160 degrees F., and in certain very painful ulcerations even this limit is not attainable. In the greater number of soft chancres a rapid soothing of pain is obtained, and there is a diminution of œdema and discharge. Sittings usually take place every day or every other day, the applications lasting for a quarter of an hour, broken by some minutes of rest. The jet of hot air is directed on the periphery of the ulceration and on the chancre itself. Care must be taken when the lesion is anfractuous to unpleat the skin, turning it back on the neighboring region, so that the air strikes directly on all the diseased points. The sensibility of the patient regulates the temperature, although it must be said that in dealing with those skin phenomena which accompany circulatory troubles it is necessary to proceed with great prudence, for the sensibility to heat is imperfectly conserved, and the production of burns is risked if the impressions of the patient remain the only standard of the temperature which is to be applied. The author states that in his 25 cases of soft chancre a rapid amelioration and cure was almost always brought about if the treatment were regularly followed. In only one of the patients

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did the condition remain unmodified, and in this case the œdema of the preputial region covered over the ulcerations and stopped the entrance of the air. He believes that thermotherapy acts in these cases by destroying the bacillus and also by stimulating the bio-activity of the tissues, which is a well-known property of hot air in a hyperæmic dose. The clearing up of such ulcerations is certainly more rapid than by means of ordinary dressings. He has obtained good results with hot air in the treatment of certain rebellious ulcerations of indeterminate character, and even in some small x-ray ulcers following upon indiscreet radiotherapy. Acro-asphyxia and chilblains have also yielded to this treatment. Nevertheless, there are cases which appear to be uninfluenced by this method.—*B. M. J.*

Bone Lesions Accompanying Chronic Leg Ulcers

W. P. Coues (*Boston Medical and Surgical Journal*) states that: 1. Long-continued ulceration of the leg, whether varicose, specific, or undetermined, is often accompanied by extensive changes in the underlying long bones, often only demonstrable by radiographs. These changes may be specific or non-specific. A careful examination and thoughtful interpretation of the radiographs will differentiate the specific from the non-specific bone lesions. 2. These underlying lesions of bone are of great importance as regards treatment, as they occur too commonly to be ignored or passed over as occasional. 3. Do the ulcers of the soft parts cause the bone condition or do the bone lesions cause the ulceration of the soft parts? The author believes that in the long-continued ulceration this finally has its effect on the periosteum. In the specific cases the bone process is not by direct extension in the majority of cases, but the bone lesions are an index of the probable character of the ulceration of the soft parts. Some cases, however, undoubtedly arise from direct extension of a specific process in the periosteum, extending outward to the soft tissues and forming an ulcer. 4. Iodide of potassium helps both kinds of cases, specific or non-specific, many of these cases having a high blood pressure. 5. All cases of leg ulcers should have raidographs taken of the underlying bones, and be carefully tested for tabes. Many of them, which are supposed to be varicose on account of accompanying varicose veins, are really specific.—*Medical Record.*

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Original Communications

SOME ASPECTS OF NEUROLOGY TO GENERAL PRACTICE*

BY WILLIAM ALDREN TURNER, M.D., OF LONDON.

Mr. President and Gentlemen:—

My first duty, a most agreeable one, is to express to you, sir, my cordial thanks for the invitation which you have given me to deliver the address in Medicine before the Ontario Medical Association at its thirty-second Annual Meeting.

In selecting a subject on which to address you, it has seemed to me that some of the aspects of Neurology to general practice would not be considered out of place. This choice has in consequence permitted me, among other matters, to make a few remarks upon psycho-therapeutics, a subject which is claiming much attention at the present time, especially on this side.

DR. HUGHLINGS JACKSON.

I cannot, however, pass to the subject of my address without paying my tribute to the loss which clinical medicine, and more especially that branch of it which claims my attention, namely, the Diseases of the Nervous System, has sustained in the death of Dr. Hughlings Jackson, which took place last autumn.

He was the father of British Neurology, and all those whose activities are devoted towards this subject, whether as physiologists, pathologists or practitioners, claim him as their Master.

* An address to the Ontario Medical Association, Toronto, May 21st, 1912.

His influence with his colleagues and upon his pupils was great, but his studious nature and retiring habits rendered him little known in the public life of the profession in London.

He possessed a rare combination of mental qualities, keen clinical instinct with a strong philosophic bent. His teaching illumined many dark places and obscure corners of the Nervous System, and his original views upon the "levels" into which he theoretically divided that System, did much to clarify the study of its diseases. His name will long be perpetuated in that variety of localised convulsion which he described, and which is known as Jacksonian Epilepsy.

THE CLINICAL LABORATORY.

When a comparison is made between the practice of twelve or fifteen years ago and that of to-day, the most striking feature of difference will be found in the assistance which various auxiliary methods, more especially the clinical laboratory and the Röntgen Rays, have rendered to both the diagnosis and the treatment of disease.

The introduction of laboratory methods upon modern lines may be said to date from the investigations of Pasteur upon rabies and Koch upon the tubercle bacillus, and more particularly from the introduction by the latter of tuberculin injections.

It is only, however, within comparatively recent years that these methods have been so developed and extended as to form almost a separate department of practical medicine. So extensive, indeed, has been their application and so efficacious the uses of the laboratory in clinical work, that a new class of highly-trained and specialized practitioners has been solved.

There are many who think that clinical medicine is becoming too dependent upon the observations made in the laboratory, and that the old time method of studying the patient as the soil in which disease takes root and growth, is being too often replaced by examination upon disease in test-tubes. It will, I think, be generally admitted that the laboratory investigation is in many cases a most useful aid to the bedside examination, but should never be allowed to replace it.

In my own branch of clinical medicine, much useful information may be obtained with the co-operation of the clinical pathologist, but there are very few organic diseases of the nervous system, even in the early stages, a diagnosis of which cannot be made by a careful bedside examination along well-

recognized lines. The readiness and completeness with which an opinion may be formed from an investigation of the cerebro-spinal fluid, should not be allowed to replace, but only augment, the usual bedside observations. But, notwithstanding, there are many morbid conditions in which such an examination is desirable, and even essential to complete the diagnosis.

Lumbar Puncture, by means of which the cerebro-spinal fluid is obtained, was introduced originally by Quincke[1] in 1891. In the early days following its introduction, the cerebro-spinal fluid was examined with a view more especially to the differential diagnosis of the various forms of acute meningitis, and it still finds one of its most helpful applications in these diseases.

By its aid the cellular and bacterial elements of the fluid are examined and valuable information is obtained as to the precise form of meningitis and the nature of the infective agent.

In cerebro-spinal meningitis, Weichselbaum demonstrated the meningo-coccus in connection with a large polymorpho-nuclear increase. In tuberculous meningitis Widal and others showed that mono-nuclear lymphocytes predominate, while in the purulent forms of acute meningitis the polymorpho-nuclear cells are increased, and cultivation reveals the presence of staphylo, strepto and pneumococci.

The presence, however, of polymorpho-nuclear cells should not be regarded as proving the existence of suppurative meningitis, as they may be found in brain abscess, suppurative labyrinthitis and sinus phlebitis, without any direct implication of the cerebral membranes.

The bacteriological examination of the fluid also is far-reaching, for the absence of bacilli in serous meningitis, cerebral tumor and hydrocephalus would serve to distinguish these conditions from meningitis, notwithstanding the similarity of symptoms in some cases.

At a later date the investigations of Widal[2], Sicard and others of the French school, demonstrated the almost constant increase of the lymphocytes in certain chronic degenerative diseases of syphilitic origin, such as paralytic dementia and tabes dorsalis. According to Noune[3], a marked lymphocytosis is present in 100 per cent. of the former and 90 per cent. of the latter.

The constant increase of the lymphocyte count in these diseases, even in the early stages, was used as a means of diagnosis, when the usual clinical symptoms were not obtrusive. I

have seen a few cases in which such an examination was necessary to establish a diagnosis, but in the majority, even in an early stage, some clinical signs will be found if carefully looked for.

The association of a slight increase in the lymphocyte count along with Argyll-Robertson pupils, (or loss of the pupillary light reaction), in a case presenting neurasthenic or other symptoms of nervous breakdown, but without definite physical signs of tabes dorsalis, would scarcely be sufficient ground on which to base a diagnosis of this disease. This combination of symptoms is not uncommon, and considerable difficulty may be experienced in forming a differential diagnosis as to whether the case in question is of a functional or organic character.

Since the introduction of the Wassermann test, a further reaction of importance has been added to diagnosis; but there are some physicians who rely upon cyto-diagnosis as of equal value in the differentiation of these cases.

It should, however, be mentioned that a lymphocytosis has been found in certain diseases of a non-specific character such as herpes zoster, Landry's paralysis and enteric fever.

The observation of Mott[4] and Haliburton that cholin was present in the cerebro-spinal fluid in organic diseases was at one time regarded as a possible means of establishing a diagnosis between organic and functional disorders of the nervous system. As this observation has not assumed sufficient pathological importance, and as the technique is complicated and difficult, the method has been abandoned as a diagnostic resource.

Recently the examination of the cerebro-spinal fluid for the Wassermann reaction has been undertaken, especially in the early stages of those diseases in which a specific causation is probable, and when the usual physical signs are either not present or only to an uncertain or equivocal extent.

Most practitioners see from time to time cases having a definite neurological or mental aspect, in which it is difficult to say from the physical signs alone, such as Argyll-Robertson pupils and alterations in the reflexes, whether the symptoms are functional and temporary, or indicate the onset of serious organic disease.

The cases to which reference is made are usually of adult age and commonly of the male sex. They may show signs of neurasthenic breakdown, some degree of mental depression or excitement, or acute insomnia for which no obvious cause is

apparent. On the other hand, persistent headache, progressive loss of memory, epilepsy, and eclamptic convulsions or symptoms of arterio-sclerosis may be the outstanding features.

In this type of case, the examination of the blood and cerebro-spinal fluid by the Wassermann test is regarded as being of great diagnostic value, and as throwing much light upon the underlying structural changes. It is also a means of differentiating between functional and organic nervous conditions, occurring in syphilitic subjects.

The existence of a positive Wassermann reaction of the blood serum in the type of case just described would be an indication merely of the constitutional state, but would not throw any light upon the condition of the central nervous system.

If, however, a positive Wassermann reaction was found in the cerebro-spinal fluid as well, and if with this there was associated a large increase in the lymphocyte count, a diagnosis of parasyphilitic disease, most likely general paralysis, might with confidence be made.

There is also evidence that the reaction of the blood serum may be negative while that of the cerebro-spinal fluid may be positive in these cases. There are also cases in which the lymphocyte count is above the normal, but does not reach the high number found in general paralysis. This latter type is usually associated with a positive cerebro-spinal reaction. The significance of this type is less certain, but it probably points to a chronic inflammatory condition of the central nervous system.

The proportion of cases of tabes dorsalis which show a positive Wassermann reaction of the cerebro-spinal fluid varies from 5 or 10 per cent. according to Noune up to about 50 per cent. in Mott's[5] experience.

The examination therefore of the cerebro-spinal fluid by the Wassermann test, has come to be of immense practical value in the differential diagnosis of functional and organic nervous conditions, occurring in syphilitic subjects. Many cases occur, however, in which such an examination is unnecessary; it should, in fact, be reserved for cases in an early or equivocal stage, or for those in which the physical signs are not sufficiently characteristic.

Lumbar puncture has also been adopted as a therapeutic means, but its application for this purpose is limited and has been confined mainly to cerebro-spinal meningitis. The removal of a quantity of fluid is an operation not unattended by danger,

and in disorders characterized by an increase of the intracranial pressure, such as cerebellar tumors, the risk would seem to be great. Removal of some fluid, however, is often of advantage in the coma of a cerebral hæmorrhage, and in hydrocephalus. Lumbar puncture is also used to assist the effects of operation upon meningitis secondary to ear disease, when it acts as a temporary drainage for the removal of inflammatory products.

Serotherapy. The diseases of the nervous system do not lend themselves, so far as their study has yet gone, to treatment by serums and vaccines. There are, however, two maladies—cerebro-spinal fever and acute poliomyelitis—whose symptoms indicate nervous derangement, but whose pathology places them under the acute infectious disorders.

The infection of the central nervous system through the posterior nares and naso-pharynx, the probable similarity of the infective agent in both diseases, and the fact that they are known to occur in epidemic and sporadic forms, have opened the way for a better study and has led to the view that they are probably of the same or similar pathogenic nature.

The artificial production of poliomyelitis in monkeys by Flexner[6] and others has thrown fresh light upon its pathogeny, but attempts to prevent or cure it after experimental production by means of serum or vaccines have not been encouraging.

For cerebro-spinal meningitis, on the other hand, a number of serums have been prepared and their administration during the early days of the fever would appear to be of service.

Flexner states that he has largely reduced the mortality by the use of his serum.

It is difficult to make any authentic statement upon the use of serum and vaccines in the meningitides secondary to ear disease. Their employment, however, would appear to be of some value as an auxiliary method in operative treatment. An autogenous vaccine ought to be prepared and employed in all these cases, although its direct influence cannot at present be estimated.

The Röntgen Rays find little application for their use in diseases of the nervous system. It was at one time thought that they might be of value in the location of tumors within the cranial cavity. This has not been found of any real value. They are, however, of decided value in the diagnosis of morbid conditions of the bony tissues, surrounding the central nervous

system, especially with reference to pituitary and other lesions at the base of the skull.

A minor, but at the same time interesting observation, has been made from their universal application in all cases of muscular atrophy affecting the small muscles of the hands. It has been found by X-ray photographs of the neck in many of these cases, occurring especially in young women, how frequently the presence of an additional or cervical rib is the cause of the muscular atrophy, and how satisfactory the recovery may be after the removal of the accessory piece of bone.

In cases of neurasthenia, accompanied by gastro and enteroptosis, the examination of the size, shape, position and motor action of the stomach and intestines may be easily and satisfactorily determined by tracing the course of a bismuth meal through the digestive tract by X-ray examination.

Too much importance cannot be given to this method of examining a portion of the body whose functions have so far not been open to a closer examination than could be obtained through abdominal palpation.

THE BROMIDES IN THE TREATMENT OF EPILEPSY.

There exists a strong feeling in the popular mind that the prolonged use of the bromides in the treatment of epilepsy is not only useless, but actually harmful. One might even say that this feeling to some extent has taken hold of the medical mind. There is, in fact, in some quarters a reaction against the administration of bromides in the treatment of this disease.

There is no doubt that since the introduction of the bromides in 1857 in the treatment of epilepsy, most epileptics at some period in the course of their malady have been treated by these drugs. The almost universal prescribing of the bromides during the past half century with more or less success, has to a large extent deprived such patients of the advantages which certainly may be obtained from hygienic, dietetic and disciplinary lines of treatment.

The decision as to whether a particular case of epilepsy has been cured in the proper sense of that term is difficult to determine, as it is well known that attacks may recur even after an interval of 20 or more years. But it may be conceded that arrests of fits for a period of from 5 to 10 years in a case which presents no mental stigmata and in which all treatment has been suspended may be deemed as cured.

It is just this difficulty in defining a cure, which renders the discussion of the problem of the value of bromides so difficult. In the pre-bromide days, that is before the year 1857, quite a number of cases of epilepsy were recorded by the French and English physicians as cured, the percentage varying from 5 to 13 per cent.[7] These are the results recorded by physicians who used remedies such as oxide of zinc, nitrate of silver, and belladonna, some of which have largely passed out of common use.

On the other hand, the statistics of those who have treated epilepsy with the bromides do not differ materially from those just mentioned. Since the introduction of the bromides the statistics of cured cases also vary from 4 or 5 to 12 per cent.[7] Medical writers, therefore, such as Pierce Clark[8] of New York, and others, who favor the abolition of sedative drugs in the treatment of this disease, find in the above quoted figures a strong basis for their contention, that the bromides are neither necessary nor desirable adjuvants to ordinary hygienic remedies.

It is therefore a matter of importance to ascertain whether any real basis exists for the feeling against the use of the bromides, or whether this view is only another instance of popular misconception, of which there are several examples in this disease.

My experience of the treatment of epilepsy extends over some 16 or 18 years, during which time I have prescribed for several thousands of epileptics in all stages and varieties of the malady.

I can without hesitation say that the influence of the bromides upon epileptic fits is both variable and uncertain. In a certain proportion of cases, amounting to about 25 per cent. so much benefit is derived that the attacks are either permanently or temporarily arrested. It is probable that the spontaneously curable cases of the disease are found in this group, cases which in the view of some writers are arrested not in consequence of, but in spite of the remedy. The curable types of epilepsy are recognizable early in the disease, and in them I consider early and persistent use of small doses of the bromides most essential.

In a second group of cases, amounting to a further 25 per cent. some improvement is derived from the administration of the bromides, mainly in the direction of lessening the frequency and severity of the fits. This may be looked upon as the common temporary result of bromide treatment, and is what may with

confidence be expected in many cases in the early stages of the disease.

In the remaining group, amounting to about 50 per cent. the bromides either have no influence at all upon the fits or are actually deleterious.

It is therefore obvious that about half the number of epileptics derive no benefit from the administration of the bromides, from which it might be argued that these salts are of little, if indeed any, use in the treatment of epilepsy. On the other hand, there is the 25-50 per cent. which derive great benefit from these drugs, including the 10 or 12 per cent. which are cured.

It is within the experience of most physicians, especially of those working amongst the hospital class, that no complete record can be obtained either of the number arrested or the duration of the arrest, as there is a tendency for the patient to cease attendance once he is relieved of his symptoms.

I hold that it is an error to say that the bromides are of no use in the treatment of epilepsy. If 50 per cent. of the cases derive some benefit from the administration of these drugs, then all cases of recent origin should be given the benefit of the remedy for a time.

I should, however, be the last person to neglect the value of diet, occupation, and general mental and physical hygiene in the sufferer from the disease. By these means the dose of the salt is kept at a minimum which will produce the desired effect; and the most successful and satisfactory cases of this malady are those in which a combination of sedative remedy, diet and general hygiene are prescribed and administered under the care of a nurse, attendant or other person, who will enter into evey detail of the case and its treatment, both in the letter and in the spirit.

A few remarks upon some popular fallacies in connection with epilepsy may not be out of place.

In the first instance, as to "growing out" of fits. It has long been a popular idea that an epileptic on reaching a certain age or after a certain number of years of the disease, may outgrow his attacks. The age is variously stated, but twenty-one is frequently mentioned by the parents as having been the one given by the doctor.

There are two age-periods when "growing out" may be looked for. The first is the period of childhood between 4 or 5 and 7 or 8 years in those whose fits commence in infancy.

In addition to being a period when fits may with some certainty be expected to cease, at all events for a time, it is also an epoch during which the onset of epilepsy is relatively uncommon.

The second is between the ages of 21 and 25 or 26 (adolescence) in those whose fits have commenced during puberty. I have elsewhere[9] shown that the quinquennial period, 21 to 25 years of age, is that one which seems most favorable for the arrest of epilepsy in those whose fits commenced between 15 and 20. This bears out a further observation that epileptic fits are more prone to arrest during the first three to five years following their onset. If therefore there is another period in which a patient may "outgrow" his fits, it is between the ages of 21 and 25 or 26, in those cases in which the disease has commenced during puberty.

There is no evidence that the climacteric period has any influence upon the arrest of epilepsy, except perhaps in a few isolated cases.

Secondly, as to the influence of the catamenia. The popular belief that the satisfactory and regular establishment of the menstrual functions will arrest the disease has no scientific basis. The onset of fits in girls is commonly accompanied by irregularity in the period, but it is rare to find any amelioration when the periods become regularly established. Physiological amenorrhœa may or may not have a beneficial effect.

Thirdly, as to marriage. There would appear to be no real foundation for the widespread belief, mainly held by the less educated section of the community, that the marriage of an epileptic girl, especially if pregnancy results, favors the cure of the disease. On the contrary, although isolated instances of such a cure occur, the consequences of matrimony tend to the production of circumstances distinctly unfavorable to the arrest of the disease. That there is no certainty in the influence of marriage upon epilepsy, is the result of the observations of most writers on this subject.

The influence, however, upon the individual is relatively small as compared with that upon the offspring, and the consequent transmission of the disease. In definitely hereditary cases it is probable that one or more children out of several will become epileptic; there is no certainty that any of the offspring will suffer, although it is unlikely that all will escape.

MIND AND BODY. HYSTERIA.

It has been the custom in the teaching of the schools largely to disregard the mental side of disease, and to consider

as altogether a special study symptoms and diseases based upon a psychical foundation.

Perhaps, under existing arrangements, such a dissociation is necessary, but the close inter-relation between mental and physical symptoms is all-pervading, and there will be an advance in clinical teaching when this aspect is more decidedly brought before the attention of students during their hospital career.

In the first place, there is no physical disorder, however slight, which does not produce some effect upon the mind, though varying in degree according to the temperament. Every practitioner is aware how much the course and treatment of an acute inflammatory or other malady depends upon the mental attitude of the patient, according as he regards his condition from a hopeful or a pessimistic aspect.

There are many persons who consider that the onset of some unpleasant or unaccustomed sensation in any part of the body signifies the development of a serious disease, a form of spurious hypochondriasis, which only requires the *ipse dixit* of their physician to dispel. But a type of case is occasionally met with, in which the commencement of a grave and incurable malady may be preceded or accompanied by fears in the patient's mind that such a calamity is in store for him. It is in fact a presentiment of actual physical disorder, and sometimes of dissolution.

Then there is the genuine hypochondriasis, a morbid fear of disease affecting one's body, which is a mental disease *sui generis*. It may develop, as Freud[10] has explained, out of an anxiety neurosis, or a more permanent state of hypochondriasis may issue out of a temporary neurasthenia or physical breakdown.

Further, we recognize the influence of nervous and physical emotions in the causation of physical symptoms. According as an emotion is pleasurable or painful, we find respectively increase of the heart's action, increased muscular energy and a sense of well being, or inhibition of the gastro-intestinal functions, a keen sense of fatigue and a decrease of muscular energy.

The effect of an emotional influence upon the physical condition has been ingeniously shown by the experimental researches of Pawlow[11] on the salivary secretion of dogs.

In the course of his experiments it appeared that all the phenomena which were seen in the salivary glands under physiological conditions reappeared in exactly the same manner

under the influence of psychological conditions. Thus when he pretended to throw pebbles into the dog's mouth or to cast in sand, or to pour in something disagreeable, or when it was offered this or that kind of food, a secretion either immediately appeared or it did not appear, in accordance with the properties of the substance, which he had previously seen to regulate the quantity and nature of the juice when physiologically excited to flow. If he pretended to throw in sand a watery saliva escaped from the mucous glands; if food, a slimy saliva; if the food were dry, a large quantity of saliva flowed out, even when it excited no special interest on the part of the dog. When a moist food was presented, less saliva appeared, however eagerly the dog may have desired the food.

When this subject is viewed more especially from the clinico-neurological standpoint, it becomes evident that many depressive states, characterized by hesitations, doubts, scruples, anxiety, apprehensions and morbid fears, are associated with derangements of the bodily functions, such as dryness of the mouth, furring of the tongue, flatulence, constipation, and the like.

Owing to the lessened vascular tone of the emotional depressive states, the body also is more prone to physical disorder and more ready to receive the encroachments of infective organisms.

Mental influences may so modify the appearance of disease that a wrong impression sometimes may be conveyed to the physician's mind. Most of us may recall occasions when it has seemed as if a fatal termination were imminent, when in reality the gravity of the situation was dependent upon a depressive mental state rather than upon true physical weakness.

How far the persistence of emotional and mental influences when continued for many years may predispose to organic disease by permanently impairing the secretions, and altering the vascular tone, is a subject less clearly defined.

Probably the most characteristic effect of an acute emotional shock, acting upon the mind of a person predisposed to such influences, is the production of those physical and mental symptoms, paroxysmal or paralytic, which go towards the make-up of a case of Acute Hysteria.

Hysteria is a disease which has excited interest and curiosity throughout all time. Its nature and causation were as

much a source of speculation to the ancients as to ourselves. As its name implies the disease was supposed to originate in the womb. As a later development, this idea was supplanted by the view that the sexual organs in general were concerned in the production of hysterical phenomena. The most recent hypothesis, enunciated only during the last few years, again places the causation of hysteria in sexual disturbances, but based in this case upon a psychical and not a physical foundation.

Our modern conceptions of hysteria, however, are mainly founded upon the observations and writings of Briquet, Charcot, and the Salpetriere School. It was recognized by them that hysteria was no privilege of the female sex, but that its origin had to be sought for in disturbances of the psychical functions of the brain. Charcot expressed his strong belief in the psychical nature of hysteria, and demonstrated the possibility of reproducing hysterical symptoms by hypnotic suggestion and of effecting their disappearance by a similar means.

Since his time the psychical side of hysteria has been greatly developed, and this aspect of the subject is the one which now commands the most respect.

The theories of "Nervous Mimicry" (Paget) or of "Paralysis from Idea" (Reynolds) have been displaced, and replaced, by the broader view of the subconscious mind and of the dissociation of the personality.

I shall now refer very briefly to the three chief theories of hysteria, which at the present time attract most attention. They all view the malady from the psychical side, two of them make use of the theory of the subconscious mind, (Janet, Freud) and the third emphasizes the cardinal importance of Suggestion (Babinski).

Let us look first at the theory of Janet,[12] the distinguished psychologist of the College de France. His theory is based on the view that just as a normal person sees objects in the peripheral portions of his field of vision, as well as in the centre, so the normal mind can take in and arrange sensations, memories, ideas and emotions, the comprehensiveness of his perception being the field of normal consciousness.

Janet's definition of hysteria implies a retraction or limitation of this field of personal consciousness, and a tendency to the dissociation and emancipation of the systems of ideas and functions that constitute personality. In other words, "in proportion as the field of personal consciousness diminishes, so do the subconscious mental conditions tend to flourish and abound." (Ormerod.)[13]

By this means Janet explains most of the characteristic symptoms of hysteria. "The crisis or fits of hysteria are somnambulistic states in which the patient lives some scene over again, goes through some action, or gives himself over to some idea and obeys it to the exclusion of all others. He is in a dream, living for the moment in a small world of his own. All this is forgotten when the attack is over, and he returns to normal consciousness." (Wilson).[14]

Such is the explanation of those cases of hysterical fugue or lapse of memory which are met with from time to time. It would also appear to offer an explanation of the classical hysterical fit which is more commonly seen amongst the Latin peoples, a fit characterized by much display of pantomine and histrionic effort. On the other hand, as suggested by Ormerod, it hardly offers a sufficient explanation of the simple hysterical fit or "attack of hysterics" which forms the common type of the seizure in our patients.

The same idea may be traced in the motor and sensory symptoms—the paralyses and the anæsthesias. In the former, the memory, the idea or the function of movement, may be lost, in the latter the systems of sensations, or some of them coming from the anæsthetic area are no longer connected with the main consciousness."

According to many writers, Janet's view of hysteria, thus briefly and imperfectly mentioned, is the most satisfying, and that one which harmonizes the varied and multiform symptoms of the disease. But even those who support it most warmly feel that it does not explain every variety of the malady.

The second theory is that associated with the name of Babinski[15], the physician of La Pitie, who has done more than any living clinician, by his observation on the plantar reflex and by other tests, to assist us to distinguish between functional and organic paralysis. He holds that hysteria is a special psychical state giving rise to certain symptoms, which can be reproduced by suggestion with rigorous exactness in certain subjects and be made to disappear under the sole influence of persuasion.

By this means Babinski confines the symptoms of classical hysteria to those which can be reproduced by suggestion. These are the convulsions, paralyses, contractures, tremors and anæsthesias, and to them he has given the term "pithiatic." He has, in fact, taken one of Charcot's main contentions, that to be hypnotisable is to be hysterical and that exaltation of suggesti-

bility is common to hypnosis and hysteria, and made it his criterion of hysteria.

One of the most interesting deductions from the Babinski view is that hysterical hemi-anæsthesia does not really exist, but that when present it has been suggested to the patient by maladroit examination on the part of the physician.

In one hundred consecutive cases of hysteria, Babinski failed to discover a single instance of hemi-anæsthesia. There is, however, a general consensus of opinion that this explanation is only true for a limited number of cases.

Babinski's views have been strongly criticized, chiefly in the direction of the value of suggestibility as a crucial test of hysteria. It has been stated that the majority of normal persons are suggestible. "To be suggestible and to be hysterical are not synonymous. It is generally agreed that suggestibility cannot be utilized to describe sufficiently and exclusively the hysterical mind. Hence we are led to consider hyper-suggestibility as a symptom, and effect, rather than a cause of the mental state associated with hysteria." (Wilson).

The third theory of hysteria to which reference is made is that elaborated by Freud[16], the Viennese psychologist. His view is based on the acceptance of certain doctrines—the determination of mental processes by unconscious physical factors, the existence of what he calls emotional "complexes" which are often in antagonism with each other, and the causation of many mental phenomena as a result of repression. In this as in Janet's view there is a recognition of the sub-conscious mind.

Freud's psychology of hysteria is briefly as follows:—If in a person two sets of mental or emotional "complexes" are present in opposition to each other, or a mental, or moral or emotional shock is received, for example, a physical trauma, a painful impression is made upon the mind. If relief is not obtained in an ordinary way, as by giving vent to the feelings, or forgetting, the painful emotion is repressed into the sub-conscious strata of the mind. There it is kept and prevented from returning to consciousness by the action of a resisting force, which is the same as that which originally brought about the repression. The repressed complex remains in the sub-conscious mind behaving somewhat in the nature of a foreign body, capable of influencing consciousness, but in a distorted or indirect way. In hysteria it is converted into the physical manifestations of the disease, such as the paralysis and the anæsthesias. How this "conversion" is produced is a complicated and elaborate subject, which cannot be entered into here.

The outstanding feature of Freud's hypothesis is that the repressed complexes are invariably of a sexual character. In his own words: "he who can interpret the language of hysteria can understand that the neurosis deals only with repressed sexuality." "In a normal *vita sexualis* no neurosis is possible."[17]

"In the hysterical we find all sex components which exist in the undeveloped sexual constitution of the child, in a state of repression. The essential basis of hysteria is thus the preservation of an infantile form of sexuality and the failure of the latter to develop into the normal adult type. The hysterical symptom is produced as a compromise between the normal outlet, the abnormal outlet, and the repressing forces exerted by education and environment." (Hart).[18]

It is difficult at the present time to express an opinion upon the value of Freud's views upon hysteria. He has revived the oldest doctrine of the disease (its sexual origin), but upon a psychological basis. In re-introducing the sexual element as the sole factor in hysteria and allied neuroses, he has opened the flood gates for a veritable torrent of criticism. He has been attacked vigorously by his opponents and as strenuously supported by his disciples and admirers.

Any criticism, however, of Freud's view ought to separate the hypothesis which he has enunciated, such as his conceptions of conflict, repression, and the influence of the sub-conscious mind from the method of psycho-analysis, by which he has arrived at his conclusions. There is a strong body of opinion against the universal application and acceptance of the sexual origin of hysterical symptoms. Moreover, his views upon the "conversion" of a repressed idea into the physical symptoms of hysteria would require some further explanation than has yet been given.

PSYCHO-THERAPEUTICS.

In view of the generally accepted psychical origin of all hysterical symptoms, as well as those of the closely allied psychoneuroses, such as the mental symptoms of neurasthenia, morbid fears, dreads, obsessions, and the like, it is not unnatural that the present-day methods of treating those conditions should consist in the main of psychical measures.

The influence of some kind of suggestion in the treatment of functional nervous disorders has been admitted from time immemorial; witness the influence of religious faith. But apart from this, have we not the cures effected by charlatans,

by the pseudo-scientific methods of metallo-therapy and the like, and by the wonder-workers in all countries.

The moral influence of medical men over their patients has, of course, been long recognized, but there would seem to be something more than verbal encouragement or reassurance necessary in the psycho-therapeutics of to-day.

As Mills[19] says: "In a sense, mystic medicine is psychical medicine, though the converse is not true. In the incantation of medicine men, in the appeals to omens and oracles, in the resort to healing shrines, and in the ministrations of the Christian Scientist, the psychical element is discoverable. The psychical medicine of to-day, however, is that in which the use of mental influence is resorted to on the same scientific lines, as is the use of water, medicines, electricity, or the surgeon's knife."

The modern methods of psycho-therapeutics are limited to the following:

First, *direct suggestion*. Of this there are two kinds, in one of which suggestion is effected during hypnotic sleep, in the other during the waking state. During hypnosis the physician introduces new ideas into the patient's consciousness or effects the destruction of existing ideas without the consent or judgment of the sufferer. In suggestion during the waking state the patient voluntarily places himself in a receptive condition to receive and accept suggestions made to him by the physician without argument or reason.

Suggestion during the waking state was introduced as a therapeutic method by Bernheim of Nancy, as a development out of hypnotic suggestion. According to Dejerine[20] its good effects are based partly on wonder-working and partly on Auto-suggestion. In most cases, however, it is really a form of persuasion. Dubois[21] holds that between suggestion and persuasion there is the same difference as exists between a piece of good advice and a practical joke. "Both may produce the desired result. Suggestion acts like a draught which is merely capable of producing an effect on the imagination. It is sometimes excusable, but it is not conscientious." (Dubois.)

There is no doubt, however, that in practice suggestion during the waking state may be of distinct value in certain early and mild cases of psychical upset.

Secondly, *persuasion*. This implies the re-education of the patient's mind by reasoning and argument. This method was introduced by Dubois of Berne, and in various modified ways is the remedy applied by many physicians who work along

psycho-therapeutic lines. The physician endeavors to reason with and educate his patient in the causation and production of his symptoms. It is, in fact, what may be called the method of *therapeutic conversation.* Its object is to teach and convince the patient " what he has, what he has not, what he seems to have, what he can do, what he cannot do, and what he simply believes he cannot do." (Mills.)

But there would appear to be something more in the method than mere verbal explanation. In Dejerine's words, persuasion reasserts the patient's confidence in himself, and revives those elements which make him master of himself. The physician's part lies in re-directing the patient's thoughts; there is nothing bordering on suggestion and nothing to clash with his convictions and reason. Its good effects are due to the confidence which the physician inspires in his patient.

It is therefore obvious that it can only be effective in sane persons, and is of no value in severe obsessional conditions or melancholia.

Thirdly, psycho-analysis. Re-education of the patient, in the meaning and significance of his symptoms implies some degree of psycho-analysis on the part of the physician. In a general sense, it is nothing more than a careful and exhaustive investigation into the origin, relation and importance of existing symptoms.

In the sense employed by Freud[22], however, psycho-analysis is a more elaborate proceeding and requires skill, patience and perseverance. It is not my intention to describe the method, but merely to point out that its object is to get behind the " censure," or repressing force which originally repressed and keeps suppressed the pathogenic idea in the sub-conscious strata of the mind. This pathogenic idea it will be remembered is that which gives rise, in Freud's view, to the symptoms of hysteria and the psycho-neuroses. Having by psycho-analysis overcome this resistance and given the " affect " an opportunity of flowing out through speech, the repressed idea is " brought into associative correction by drawing it into normal consciousness through the suggestion of the physician." (Freud.)

In the hands of Freud himself and of his disciples, both in Europe and on this side, the method is stated to be of practical value, but one cannot help feeling that owing to the prominence given to the sexual side in the causation of hysterical symptoms, harm may accrue by recalling sexual memories, in themselves perhaps harmless, which had long been forgotten.

During the analysis, it is not unlikely that the physician may unwittingly suggest to his patient, and in turn may himself be misled.

In Freud's sense, therefore, psycho-analysis is the evacuation of a repressed idea by a form of confession, and the re-conduction to the patient's consciousness of the thoughts underlying the symptoms. It would appear to be of great use in hysteria and some of the psycho-neuroses, but to be of little value in neurasthenia and states of anxiety.

I do not think that it requires much experience of the practical application of these methods of psycho-therapy to realize that they have their limitations. There are some psycho-neuroses of short duration and slight degree, which are readily cured by a little reasoning and convincing on the part of the physician; but there are many instances of obsessions, hesitations, doubts, anxiety, and morbid fears, which are difficult to cure by psychical means alone. On the part of the physician a knowledge of the causes and symptoms of hysteria and allied neuroses is essential, as well as a clear insight into the temperament of the patient. On the patient's part, faith in the method and in the man behind the method are essential to success.

I do not imply that it is not in the power of every earnest physician to so influence the mind of his patient by dissipating pessimism and by encouraging a healthy outlook to materially aid a cure.

But for the successful treatment of the psycho-neuroses by psychical means, a thorough knowledge both of the diseases and of the means of treatment is essential. A special class of practitioner has in consequence arisen; but it would seem to me as if those who give their attention to mental and nervous diseases are those best qualified to undertake this work.

I am, therefore, in complete agreement with those who advocate the necessity of physical means in conjunction with psycho-therapeutic efforts. The isolation of the patient in a home, institution or special ward, the deprivation of visits from relatives and friends during the course of treatment, the cutting off of correspondence and the like, are all essential adjuvants to a successful issue. Rest in bed, either indoors or in the open air, abundance of milk, massage and regulated exercises are desirable in the majority of cases.

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THE IMPORTANCE OF THE SO-CALLED PRETUBERCULAR STAGE*

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At the outset, I wish to make it clear that I do not believe it possible to recognize a true pretubercular stage or to know whether or not a person is predisposed to tuberculosis until such time as they show symptoms of the infection. The bacilli may and probably do remain latent in the tissues for a short time, causing only a slight hyperplasia before producing specific tubercles, but in this stage there is no means of recognizing their presence clinically. This is the true pretubercular stage. There is, however, a stage in nearly every case in which the bacilli are localized, usually in some gland or group of glands, and from this focus they gain entrance to the blood or lymph stream and by this means of conveyance they are brought to the lungs or other organ where their existence is usually first recognized. This period, before the bacilli reach the lungs, and become definitely localized there, is what is designated by the term "pretubercular stage," and could be more appropriately called the "prepulmonary stage." It is to this period in the development of tubercular disease that I wish to draw your attention.

The chief path of infection in pulmonary tuberculosis is still in dispute, the old belief that the bacilli gained entrance to the lungs by the air passages now being strenuously assailed by the adherents of the more recent theory of infection by the digestive tract. The first mentioned method, infection by inhalation, may be either direct or indirect, while the latter or infection by ingestion must be always an indirect method of lung infection. The infection of the lungs is not in many cases as simple a matter, pathologically speaking, as was formerly believed, and there may be an arrest of the bacilli at various points before pulmonary tuberculosis develops. The stopping places for the bacilli are the glands, usually either the bronchial or mediastinal or in some cases the mesenteric.

The vital statistics of the various countries show that there is a mortality from tuberculosis of approximately 10 per cent., that is, one out of every ten people dies of infection with the

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tubercle bacillus. Our present day experience shows us that of all cases of tuberculosis giving clinical symptoms, incipient, moderately advanced and advanced, there is approximately a 50 per cent. mortality, or in other words, one out of every two persons presenting recognizable symptoms of tuberculosis dies as a result of the infection. In this way we arrive at the conclusion that 20 per cent., or one out of every five persons, at some time or other in their lives have clinically recognizable tuberculosis. Now, for the moment let us look at the results of autopsy examinations as regards the presence of tuberculosis, active, latent or healed. Nageli of Zurich in 1900 made the startling statement that 96 per cent. of a series of 500 autopsies showed evidences of tubercular infection. Burkhardt in Dresden gives 92 per cent. in 1,452 autopsies. Other investigators confirm these figures, while some find the figures too high, the variations depending on technique and on differences of interpretation as to what constitutes evidence of tubercular infection, but all agree that nearly all persons who reach adult life have been infected at some time or other with tuberculosis. As has been said in a frequently quoted dictum, "Am ende hat jeder Mensch ein bischen Tuberculose." These figures have been pretty well corroborated by various series of the more delicate tuberculin tests, which even in clinically healthy adults give a large percentage of positive reactions. What is the significance of these figures? This, that while tubercular infection is nearly universal in the human race, only approximately 20 per cent., or one out of every five people thus infected, develops clinical tuberculosis, and we can fairly conclude that the human race as a whole has a high degree of immunity to tuberculosis. I think that we can also say with reason that there is a stage in the process of tubercular infection in nearly all cases in which the bacilli are latent and localized before reaching the lungs and manifesting signs of pulmonary or general tuberculosis. This is the so-called pretubercular stage, and during this stage there may be symptoms which as a rule are unrecognized and untreated, and so, being neglected, go on to the next stage, namely, pulmonary tuberculosis, consumption or phthisis.

The causes which are operative in the step from latency to activity are those which are so often spoken of as resulting in tuberculosis, namely, overwork, mental worry, excesses, acute illnesses, neglected colds, exposure to damp and cold, improper food and housing, poor hygienic surroundings, and so forth; in fact, anything which depresses the system. These are all con-

tributing causes, and so lower the resistance that the ever-present tubercle bacillus becomes active. As a result of such conditions as those mentioned, we get a period of vague and indefinite general symptoms, which are the forerunners of definite lung trouble. During this period a correct diagnosis can often only be arrived at by the exclusion of all other possibilities. In other cases we reach our diagnosis by a careful study of the history of the patient correlating this to the symptoms. The important points in the history to be considered are previous similar indispositions, susceptibility to various infections showing lowered general resistance, exposure to tuberculosis, family history with reference to tuberculosis, patients' occupation and general mode of life. The general symptoms of toxæmia of a mild type are present in some cases without apparent cause. These are fever, malaise, loss of appetite, loss of weight and strength, languor, indigestion, sometimes diarrhœa and tachycardia. Perhaps there may be only a general feeling of being under the weather, coming on without definite cause and recurring. A proneness to catch cold is not an uncommon history, or repeated attacks of bronchitis with negative lung findings. These last two symptoms are often caused by the irritation of enlarged bronchial glands. Such localization in the bronchial glands is very difficult to diagnose with any degree of certainty, but a patient with symptoms of pulmonary tuberculosis and without physical signs shoud suggest to us this possibility. A pleurisy, either dry or with effusion, should be treated with more respect than is usually given it, for, in the vast majority of cases, the so-called idiopathic pleurisy is merely a symptom and actually tuberculous and the forerunner of definite pulmonary tuberculosis. To anyone who has taken the history of a large number of cases of tuberculosis, the fact that a pleurisy has preceded in a large percentage can hardly have escaped notice. Whether scrofula is a distinct disease or whether it is always a manifestation of tuberculosis is still a disputed point, but every one must admit that a scrofulous child is one of the most favorable soils for later tuberculosis. Harbitz, who has made a study of this point in Sweden, states that the majority of scrofulous children in that country develop pulmonary tuberculosis in later life. Anæmia with its accompanying symptoms may be the outward manifestation of a latent tuberculosis and should not be too lightly passed over with the assurance that six weeks of iron treatment will cure. We know that a certain number of cases of anæmia in young

girls are secondary to tuberculosis, and in every case of this kind presenting itself for diagnosis and treatment this should be definitely excluded by a most rigid examination. The disease, described by Landouzy as typho-bacillose, is very frequently mistaken for true typhoid, and its real nature only suspected by the later development of pulmonary symptoms. In cases of atypical typhoid we should remember the possibility of its being an acute outbreak in a previously latent focus of tubercular infection. A certain number of vague muscle and joint pains, usually diagnosed by that most useful general term of rheumatism, are toxic in origin and may be due to the toxines of the tubercle bacillus. Enlarged tonsils and adenoids are in no small percentage of cases found to be the seat of tubercular invasion. If a child with enlarged tonsils or adenoids has periodic febrile attacks or shows symptoms of mild toxæmia, this fact should be remembered, especially if the child has been exposed to tuberculosis. Chronically enlarged glands in children are very frequently of tuberculous origin and sometimes those which enlarge acutely are due to the same cause.

Thus it will be seen that while the symptoms are protean in character and usually indefinite, they are clear enough to put us on our guard if we are on the look-out for them, and they should be recognized more often than they are, for it is in these cases that permanent good may be done and future trouble avoided.

The treatment is simple, and being simple is as a result often neglected, and is the same as recommended for pulmonary tuberculosis, namely, fresh air, good food and rest. Change of surroundings and freedom from worry, with an outdoor life, regular hours and meals, rest and supervised exercise, avoiding overdoing, and symptomatic treatment when called for, for a period of from six weeks to three months will in the majority of cases prevent more serious trouble and make a healthy citizen of the patient; while non-treatment or misdirected treatment will not save the patient from what will probably at a later date be definite pulmonary tuberculosis with a much longer period of enforced idleness and possibly permanent invalidism. That this can be done is proved by the work at Brehmer Rest and other preventoria. I have had the privilege of attending Brehmer Rest during the past winter in the absence of the regular medical superintendent and founder, Dr. A. J. Richer, and have been much impressed with its usefulness in dealing

with this class of cases. With accommodation for thirteen patients only, in the course of a year from 50 to 60 can be treated, and in 90 per cent. of these permanent good done. The cry of all sanatoria is for early cases if results are to be obtained, but even in the most incipient, six months or longer is necessary for arrest, while the so-called pretuberculars can usually be permanently benefited in a much shorter time, illustrating the old adage that an ounce of prevention is worth a pound of cure.

Ninety per cent. or more of humanity can be divided into four classes as regards tuberculosis: 1. Those who are infected without showing any evidences of it during life. 2. Those whose infection gives slight, indefinite symptoms, easily recovered from with a few months of hygienic life. 3. Those who will recover with six months or longer of most careful treatment. 4. Those who will not recover no matter what the treatment. These last need the care of the Incurable Homes. The third group are the sanatorium cases, while the second are the ones about whom I am to-day speaking and who are usually neglected till they pass into the third or fourth classes. While in the second group treatment is inexpensive and of short duration, later on it takes more time and money both for the individual and for our institutions. Much stress in the antituberculosis campaign has been laid on the dangers of infection and how these may be avoided, but the uncontrovertible fact remains that practically every adult is or has been infected, and if some of our energies were directed to keeping these infected persons from breaking down and developing pulmonary tuberculosis and in raising their powers of resistance, the results would be even more gratifying than at present and the mortality from tuberculosis would in a few years show a more marked decrease than it has during the past decade.

Selected Articles.

DUODENO-CHOLEDOCHOTOMY

With Case Report by Jasper Halpenny, M.A., M.D., C.M.,
Surgeon to the Winnipeg General Hospital; Lecturer in Clinical Surgery at Manitoba Medical College.

Before McBurney first incised the duodenum to gain access to a gallstone in the second or third part of the common bile-duct, great difficulty was experienced in reaching stones in this region. This procedure, like many another, required some years to popularize. While discussing McBurney's paper[1] Briddon[2] voiced the then popular conception regarding the danger of sepsis where the continuity of the bowel is disturbed when he "agreed that in exceptional cases the operation could be better done through the duodenum, providing the operator was conversant with the details of the operation; for most general surgeons the incision of the duodenum might prove difficult." Five years before this Maurice H. Richardson[3] reported McBurney's first case, and, voicing the same sentiments, said: "Operations upon the common duct by way of the duodenum may be practised under exceptional circumstances as in McBurney's case of a gallstone impacted near the duodenum (removed by incision of the duodenum and subsequent suture, with recovery)." I take it that the chief difficulty suggested would be that of avoiding infection of the peritoneum. McBurney referred to this as a "traditional fear, which dates back to a period long before intestinal surgery was understood, of opening and suturing a piece of gut." Cushing's investigations regarding the flora of the stomach and duodenum make it clear that a fair approach to an aseptic condition can be secured. There is much less danger from infection where a carefully prepared duodenum is incised than is the case with any other part of the intestine; and operations on the intestine are now done with more or less impunity. It would appear, therefore, that a gallstone in the inaccessible portion of the common bile duct should be removed through the duodenum unless some special contra-indication exists other than the danger of infection.

Case Report.

E.H., female, forty-two years of age. Born in Sweden; married at age of twenty-seven; has had nine children, of whom four are dead. Kindly referred to me by Dr. C. E. Johnson. Patient entered St. Boniface Hospital June 26, 1909, where I saw her for the first time. She was complaining of pain over the region of the gall bladder, anorexia and marked weakness; she was deeply jaundiced. At the age of twenty she had measles and says she has had "liver trouble" ever since. She has had marked constipation since that time. At the age of twenty-three she had "typho-malaria" for about four months. At the age of thirty-three she had "pneumonia" for two and a half months.

Her present illness began in June, 1907, with an attack of pain which came on very suddenly, lasted a few hours and disappeared more slowly. The pain was so intense she was completely prostrated. It was situated to the right of the median line in the upper quadrant of the abdomen, and passed through the body and shot toward the right shoulder. This attack was followed by some digestive disturbances but no jaundice. During the next two weeks she had several similar attacks, though none so severe as the first one. After this she was free from pain for about a year and a half and was in fairly good health. In April, 1909, she had another attack similar to the first except that it was more severe. She insists that she remained unconscious during the whole night. Jaundice came on gradually after this attack and deepened with each successive attack, several of which occurred during the following week. She noticed that the urine was very dark in color, while the stool became lighter. From this time marked weakness was a prominent feature and she lost about fifteen pounds in weight.

On admission to the hospital she was deeply stained with jaundice, and was somewhat emaciated, with very flabby muscles. She was so weak she could walk but little, rather requiring to recline all the while. Her tongue was heavily coated and the appetite was very poor and capricious. There was soreness and tenderness over the infra-sternal notch, but no mass could be felt. She complained a great deal of pain in the back over the region of the tenth to the twelfth dorsal vertebrae, and radiating from here to the right shoulder blade. Pelvic pain was also complained of, but nothing could be found except a slight laceration of the cervix. The urine showed nothing abnormal except abundance of bile. The stool was clay-colored and pasty. A

general physical examination revealed nothing else abnormal. She had no vomiting and no hunger pain; no history of blood in the stool. There was no sign of disturbed portal circulation. A diagnosis of gallstone obstruction of the common duct was made.

Operation.—On July 2, 1909, she was operated upon. The incision was made near the outer border of the right rectus commencing just below the costal margin, and extended down about five inches. There were few and very slight adhesions. The gall bladder was somewhat shrunken, but free from adhesions. No enlarged glands or other mass could be felt pressing on any part of the bile tract. Three large gall stones could be easily felt, one in the fundus of the gall bladder, one in its neck and one in the third portion of the common duct. This latter stone in the ampulla of Vater was so large it was almost as easily felt with the finger in the foramen of Winslow as the one in the fundus of the gall bladder. The pancreas was normal, as far as one could judge. The duodenum and the third portion of the common duct were now picked up between the thumb and forefinger of the left hand and an incision one inch long made in the anterior border of the duodenum, after the usual toilet of the peritoneum had been attended to. Pressure on the gall bladder failed to force any bile into the intestine though the stone could be seen shining through the orifice of the duct. An effort was made to dilate the orifice sufficiently with a forceps so that the stone might be extracted. This was found impossible, and an incision was made over the stone. It was of the bilirubin-calcium variety and its nodules were well implanted in the mucus membrane so that even now it required to be extracted with forceps. The instant it was removed bile flowed copiously into the intestine. A probe, passed into the duct, encountered no obstacle till it reached the stone at the neck of the gall bladder. The incision in the anterior wall of the duodenum was closed with a Connell stitch reinforced by four Halsted stitches, Pagenstecker's celluloid being used for both. The gall bladder was now sutured to the peritoneum, incised, emptied of the two gall stones and then drained in the usual manner. The abdominal cavity was not drained.

For three days following the operation the patient vomited considerably. By the fourth day the vomiting had ceased, and the patient sat up in bed and was encouraged to eat solid food. The jaundice began to disappear at this time and by July 18 the skin was almost normal in color and the urine almost free from bile. On July 11, the patient was out of bed; on the 16th, the

discharge of bile quit, and the tube was removed. Three days later, or seventeen days after the operation, the wound was healed and the patient left the hospital; the following day she took a journey of 400 miles to her home in Alberta. On May 1, 1910, she wrote to the effect that she has since gained in weight, had never had any attacks of pain or jaundice, and that she is in good health.

Comments.—The use of solid food at the earliest opportunity occurred to me because of a former experience with a case where the gall bladder had been emptied of a number of stones and one had been removed by incising the first part of the common duct. The sinus remained open for about six weeks. I noticed that there was little bile on the dressing in the evening but a great deal in the morning. The patient was given a small meal of ordinary solid food every four hours night and day and the wound healed completely in four days. My partner, Dr. R. Mills Simpson, recently found equally satisfactory results follow four-hourly feeding in a case where the sinus healed slowly. In such cases it is needless to say that the continued discharge of bile could not be due to an undiscovered stone in the common duct, in which case this procedure would, it is quite clear, be useless. But in the absence of such common-duct obstruction, this improvement is quite in keeping with the known physiology of the parts.

The discharge of bile from the bile-duct into the duodenum is regulated by the passage of the acid contents of the stomach over the orifice of the biliary duct. Foster[5] points this out and adds: "Indeed, stimulation of this region of the duodenum with a dilute acid at once calls forth a flow, although alkaline fluids so applied have little or no effect." Cannon[6] has shown that, in the passage of food from the stomach, the maximum is reached in the case of carbo-hydrates in two hours, fats in three hours and proteids in four hours. Thus it is seen that with an ordinary mixed diet the maximum will be somewhere about the fourth hour and by giving a small meal every four hours the bile will not be allowed to be stored in the gall bladder at any time, nor will the orifice of the duct be closed for long at one time. Therefore, it is natural to suppose that four-hourly feeding would be most favorable to the rapid rushing forward of the bile and the early closing of a bile fistula in the absence of complete obstruction.

In this case, at no stage of the operation was the finger inserted into the foramen of Winslow to hold the structures

forward, though this is recommended by McBurney in a private communication to Hancock[7], where we read: "In all cases which are not complicated by very deep adhesions involving the common duct and descending portions of the duodenum, it is easy and very desirable after determining the presence of a calculus in the lower part of the duct to pass the left forefinger through the foramen of Winslow to a point behind the calculus. With the finger, the lower end of the common duct, the calculus, and the descending portion of the duodenum can be lifted forward so as to bring these parts nearly or quite to the level of the abdominal incision. The duodenum is then incised in its anterior wall for one inch to one inch and a half, the orifice of the duct is easily found and enlarged and the stone removed; all of this, and even the suture of the intestinal wound, should be completed without removing for a moment the left forefinger from its supporting position." This is the method recommended by Connell[8] also.

On this point the conclusions arrived at by Ranschoff[16] seem reasonable and important. In experimental work, as well as on human subjects, he found a fall of 30 mm. to 40 mm. in the blood pressure with the finger inserted into the foramen of Winslow and hooked forward. This fall he ascribes to interference with the portal vein, thus cutting off a large amount of blood from the general circulation. He insists that pressure from behind forward in the foramen of Winslow should be intermittent, and employed but little. Robson[9] prefers that "The termination of the common duct, including the duodenum, should be grasped between the thumb and finger of the left hand and the anterior wall of the gut cut through." This was the method employed by McLean.[10]

When a stone is lodged in the third portion of the common duct and an incision has to be made for its removal, as in the case here reported, it is universally agreed, I think, that no sewing is required, for the continuity of the duodenum on its posterior surface is not interrupted, nor is the continuity of the common duct disturbed. What is done merely consists in widening the ordinary outlet of the duct into the duodenum. The case is entirely different, however, when the stone is lodged in the duct before its entrance into the wall of the intestine. It is clear that in this case an incision from within the duodenum to the stone severs completely the postero-lateral wall of the duodenum and the antero-lateral wall of the common duct. A brief reference to the anatomy of the parts will assist

in clearing the way for a discussion of the question of suturing the posterior wall in the trans-duodenal operation.

No part of the duodenum is entirely covered by peritoneum, though a portion of the first part is nearly so at the point where its covering is derived from the two layers of the lesser omentum. Throughout its second or descending portion it is not covered on its posterior surface by peritoneum at any point. It rests behind on the right suprarenal capsule and kidney, being in contact also with the pelvis of the latter and with the beginning of the ureter; on its left is the head of the pancreas.

The common bile-duct is the continuation of the hepatic duct. It passes downward in the gastro-hepatic omentum in front of the foramen of Winslow and then descends along the postero-inner aspect of the duodenum where it is more or less completely surrounded by the pancreas. In this position at a point from two and three-fourths to three and one-fourth inches from the pylorus, it, with the duct of Wirsung, pierces the wall of the duodenum which it traverses for a distance of one-half to three-quarters of an inch. Its lower end is usually somewhat dilated, forming the ampulla of Vater, the orifice of the latter, however, being the narrowest part of the whole duct. The duct of Wirsung may pierce the bile duct at any point after they meet, or it may empty into the ampulla of Vater by a separate opening.

It would seem then that in all but exceptional cases an incision through the posterior wall of the duodenum for the removal of a stone from the retro-duodenal portion of the common bile-duct, would lie entirely posterior to the peritoneal cavity. Therefore, if infection occurs at this point it will be extra-peritoneal, not intra-peritoneal, as is stated by Moynahan[11]; and leakage will likely occur, in the absence of inflammatory union of the duct and the intestine, for along the posterior wall of the duodenum is more or less loose, areolar tissue through which infection would naturally spread. One is therefore compelled to agree entirely with Kocher[12] and with Moynahan, who says: "Sutures must be introduced to fix the opened duct into the intestine." The only occasion in which one might safely dispense with this procedure would be in the presence of adhesions between the duct and the duodenum, in which case union of the duct and intestine has kindly occurred prior to the operation, not afterward. This is what had taken place in MacLean's[13] case "where the two walls had

apparently become fused into one owing to the pressure of the stone." In his case no stitches were required.

As was stated above no appreciable pancreatitis was present in this case, though the orifice of the ampulla of Vater was completely closed. This raises the question of the causative action of the bile in pancreatitis, and in approaching this problem it is at once realized that there is an anatomical, as well as a physiological phase to the question.

With regard to the anatomy of the parts involved, one might safely follow the description given by Robson and Cammidge[14]. In their classification of the different varieties of relations of the openings of the common bile-duct and the ducts from the pancreas there are the following: (1) The common bile-duct and the duct of Wirsung each terminate in the ampulla of Vater. This is the normal variety. (2) These two ducts unite before entering the wall of the duodenum and the ampulla is absent. (3) The two ducts unite in the wall of the gut but the ampulla and the valvular caruncle are absent. (4) The two ducts unite as in 3, the ampulla is absent but the caruncle is present. (5) The common bile-duct opens along with the duct of Santorini and Wirsung's duct enters the duodenum separately. (6) The pancreas has separate ducts opening into the duodenum, only one of which accompanies the common bile-duct.

Accepting this classification it will be seen that a gall-stone blocking the orifice of the diverticulum of Vater will, in the first two varieties, make it theoretically possible for the bile to be dammed back into the pancreas; in 3 and 4 the patient may be saved from this danger; while in 5 and 6 only a small portion of the pancreas at most will be involved. In the normal case, however, if the stone is large enough to block the entrance of both ducts into the ampulla the patient will be saved from the danger of pancreatitis. This is probably what occurred in the case here reported

It is not enough, however, to consider only the mechanical problem. One must ask is the pancreatic secretion not as likely to prove the stronger and force the bile back up the common duct rather than that the bile should force the pancreatic secretion back up the duct of Wirsung? Herring and Simpson[15] have shown that in cats, dogs and monkeys the pressure of the bile and pancreatic juice are practically equal in the same species. But, what has a practical bearing on the question in hand, they found that the curve of pancreatic pressure differs

from the curve of bile pressure in the greater rapidity with which it rises and falls. "Both the rate of secretion and the rate of absorption are greater in the pancreas than they are in the liver." The total quantity of pancreatic juice secreted before the bile is secreted would not be sufficient to cause a flow in the bile-duct back to the liver. "Pancreatic secretion," they say, "is absorbed at low pressure, and it is probable that the secreting cells, when the alveolar pressure has reached a certain point, get rid of their secretion by turning it into the lymph stream." Thus the pressure of the bile being maintained for a longer time than that of the pancreatic secretion, and, given the proper anatomical conditions, it is natural to suppose that the bile will pass along the ducts into the pancreas, and will there cause an irritation of the lymphatics of the pancreas and thus cause a pancreatitis. Moreover, since the bile, when obstructed, is usually infected, it will cause an actual inflammation passing on in some cases to abscess formation.

There would thus appear to be good reason to accept the clinical view that many cases of pancreatitis are caused by gallstone obstruction of the terminal portion of the common bile-duct. How necessary it would appear therefore in all cases of gallstones, with obstruction to the flow of bile, to make sure that the common duct is cleared, and more particularly its terminal portion. And, in the case of obstruction in the duodenal portion of the duct, as well as the retro-duodenal part, the stone can best be removed in many cases by the duodenal route.

McBurney's conclusion in his paper in 1898 would still seem timely, for the prejudice against the duodenal route still exists in certain quarters. He says: "My experience would lead me to prefer this plan for the removal of a calculus situated at almost any point from the termination of the cystic duct to the point of entrance of the common duct into the duodenum. I have found the orifice of the duct easily dilatable, and it may be freely incised for at least half an inch with perfect safety."

702 Sterling Bank Building.

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—*The Saskatchewan Medical Journal.*

Editorials.

THE CARE OF THE MENTALLY DEFICIENT

Mr. E. S. Johnstone delivered an interesting address on "Our Duty to the Mentally Deficient," on the evening of May 14th, in Convocation Hall of Toronto University. Mr. Johnstone is the Superintendent of the Training School for feeble-minded girls and boys at Vineland, N.J., and is one of the most prominent experts upon work among the mentally deficient on this Continent.

The Vineland Training School is not a state institution, but is sustained by public charity, and has grown in 21 years from a little home school with eight pupils to a large public charity caring for 40 children and having 250 acres of well cultivated fruit and farm lands and lawns.

It was moved by Dr. N. A. Powell, President of the Academy of Medicine, Toronto, and seconded by G. T. Somers, President of the Board of Trade, Toronto, and carried, "That this meeting request the Board of Management of Aldermen of the City of Toronto to endeavor to secure the co-operation of the different aldermanic or council members of the cities and towns of the Province of Ontario with the view of having them appoint either from their own bodies or from among the citizens of their respective communities, delegates to meet in convention with the Toronto committee for the care of feeble-minded, for the purpose of forming a Provincial Association." The Honorable Mr. Hanna expressed his approval of the plan outlined by Mr. Johnstone. He thought there should be joint work on the part of the different

municipalities and joint work on the part of the schools as indicated in the address, and then let them go to the Provincial Government and ask it to assume responsibility for the new movement. He thought that the Government would then see what could be done having regard to the funds at its disposal.

THE ANNUAL REPORT OF THE CANADIAN ASSOCIATION FOR THE PREVENTION OF TUBERCULOSIS

We are indebted to Dr. Geo. D. Porter for the interesting report of the Executive Council of the Canadian Association for the Prevention of Tuberculosis.

It appears from it that admirable work is being done in all the Provinces of Canada in connection therewith. We desire to congratulate Dr. Porter on the good results of the magnificent work he has done in recent years, and to express the hope that he will be able to continue his work in this good cause for many years to come.

The last meeting of the Association held in Toronto, May 20-21, under the Presidency of Dr. J. Geo. Adami, of Montreal, was in all respects successful. Among those present were Professor Westbrook, University of Minnesota; Dr. Herman Biggs, General M.H.O., of New York City; Sir James Grant, Drs. Montizambert, Bryce, Hodgetts, Major Drum and Mrs. Adam Shortt, of Ottawa; Dr. Paterson, of Ste. Agathe, Que.; Hon. Adam Beck, of London; Dr. Mackid, of Calgary; Dr. Seymour, Regina; Dr. E. S. Harding, Montreal, and many other physicians from Ontario and Quebec, and a fair number of prominent physicians from Toronto.

One of the most interesting functions connected with the meeting was the reception given by the "Heather Club" at the beautiful Nurses' Home, situated on the grounds of the Hospital for Sick Children. At the same time Dr. Harold Parsons, of Toronto, gave a very interesting report of the work which is being done in Toronto by this club.

THE ONTARIO MEDICAL ASSOCIATION

Because of the fact that the officers of the Association did not issue a satisfactory provisional programme it was feared that preparations for the meeting were not being made with great vigor. Such fears were quite groundless however. The regular officers and the various local committees performed their tasks in an admirable way, and, as a consequence, the meeting was a great success.

Among those who contributed much towards such success were two well known men from the United States. Professor Alexis Carrell, of the Rockefeller Institute, New York, delivered an exceedingly interesting illustrated lecture on "Experimental Researches in the Surgery of the Blood Vessels and Transplantation of Tissues and Organs." Professor Geo. Crile, of Cleveland, greatly pleased a very large audience by the delivery of a masterly address on "Anoci Association, a New Principle in Operative Surgery." Many other papers of a high order were read, and the clinical demonstrations in the medical building and various hospitals were excellent.

The numerous social functions gave much pleasure to the members. The President, Dr. Herbert A. Bruce, entertained the members and their

friends at a very charming garden party at his residence, on the afternoon of the second day. On the same evening the annual banquet was held at McConkey's. The addresses delivered by various guests were probably the best that have ever been heard at a medical banquet in Toronto. The principal speakers were Dr. Mackid, of Calgary, Dr. Seymour, of Regina, Hon. Dr. Reid, Hon. Dr. Pyne, Principal Falconer, Ven. Archdeacon Cody, Judge Riddell, and Dean Clarke.

Various social and sporting clubs of Toronto and vicinity extended very kindly courtesies to the members. The President and Directors of the Ontario Jockey Club issued complimentary badges to the members and their wives for the races on the afternoon of May 23.

We extend our congratulations to the retiring President, Dr. Bruce, on the signal tact and ability he displayed as presiding officer. "The King is dead —long live the King!" Dr. Charley McGillivray, of Whitby, was elected President. Dr. F. Arnold Clarkson was re-elected Secretary, and Dr. J. H. Elliott, of Toronto, was elected Treasurer in the place of Dr. J. Heurner Mullin, Hamilton, resigned.

SEVENTEENTH INTERNATIONAL CONGRESS OF MEDICINE

The second official circular of the Seventeenth International Medical Congress to be held in London, England, August 6th to 12th, 1913, has recently been issued.

The Address in Medicine is by Professor Chauffard, the Address in Surgery by Prof. Harvey Cush-

ing, while Prof. Paul Ehrlich is to deliver the Address in Pathology.

The circular contains the Provisional Programme of subjects for discussion in the 23 sections constituting the Congress.

It is hoped that the profession in Canada will take full advantage of an event of such great importance in the medical world in particular, as they have been accorded such recognition by the British authorities in charge of the Congress.

Dr. W. H. B. Aikins, who is Secretary of the Canadian Committee, will be pleased to send these circulars or furnish other information to any one interested.

MEDICAL DISTRICTS IN ONTARIO

The Province of Ontario will be divided into seven districts for the purpose of health inspection. Five of the districts will be made up as follows:

No. 1.—Counties of Essex, Kent, Lambton, Elgin and Oxford.

No. 2.—Counties of Bruce, Huron, Grey, Perth, Wellington, Dufferin and Waterloo.

No. 3.—Counties of Welland, Lincoln, Haldimand, Norfolk, Brant, Wentworth, Peel, York, Halton.

No. 4.—Counties of Ontario, Durham, Northumberland, Prince Edward, Hastings, Peterboro, Muskoka and Simcoe, Victoria.

No. 5.—Counties of Lennox, Addington, Frontenac, Leeds, Grenville, Dundas, Stormont, Glengarry, Russell, Carleton, Lanark.

In addition, Northern Ontario, including the Parry Sound District, will be divided into two districts.

NURSES' CLUB HOUSE

Mr. J. Ross Robertson has presented to the nurses of Toronto a new club house, situated at 295 Sherbourne Street. Mr. Robertson said during the opening services that when he first took up hospital work 30 years ago, he cherished the thought that he might some day do something to promote the comfort and happiness of those ladies who followed the profession of nursing. Men enjoyed social life at their clubs, and he saw no reason why nurses should not do the same thing. Mr. Robertson's great work in connection with the Children's Hospital is, of course, well known. Among the best of his works in connection with that very worthy institution was the presentation of a beautiful home for its nurses. Mrs. A. H. Paffard, President of the Nurses' Club, thanked Mr. Robertson on behalf of the nurses for the generous gift. She called attention to the important part Mrs. Robertson had taken in getting the club organized. The club will be the home and meeting place of all nurses, and the Registry Office will be open continuously day and night.

We are told by the Toronto *Mail and Empire* that this new home is replete with every convenience for the comforts of the nurses. In addition to the reception, reading, dining and office rooms, a number of bedrooms have been provided for the use of visitors. There is also a large room for meetings and social entertainments. The whole building has been finished

in mission fashion, which gives a cheerful and cosy effect. Miss Annie Robinson will be the Superintendent in charge. The club has now about 300 members who will be responsible for the maintenance of the new institution. The club is the first of its kind in Canada.

THE CANADIAN MEDICAL ASSOCIATION

The forty-fifth annual meeting of the Canadian Medical Association will be held at Edmonton, August 10th to 14th. It is expected that the first day being Saturday will be devoted to business. The scientific part of the programme will begin on Monday and occupy the three days, Monday, Tuesday and Wednesday. At the conclusion of the meeting the G. T. P. offers an excursion to the famous Yellow Head Pass.

While it was at first thought that one day of the meeting should be spent in Calgary, that idea has been abandoned. A visit to Calgary may precede or follow the meeting in Edmonton. Everything goes to show that a splendid programme of papers will be ready, and the proverbial hospitality of the West is shown in the numerous arrangements already made for the amusement and the comfort of the visiting members.

As to railway rates, the Standard Convention Certificate Plan will be in force from all points in Canada; that is, the rate will be single fare plus 25c for the return trip. Members are urged to ask from their local station agent for the Standard Convention Certificate, which will be honored for ticket for return trip. It is necessary that a certain number of

certificates be secured before the rate can be valid. It would be wise also to secure sleeping car reservations early.

Those members who desire to go on to the Coast, or return by one of the United States routes, can secure summer tourist rates which are very low.

The meeting in Edmonton offers an excellent opportunity to men in the East of seeing the West economically and at one of the most favorable times of the year.

LORD LISTER'S ESTATE

Mr. John Wood, F.R.S., in 1878, congratulated Prof. Lister upon the possession of those advantages which made him so powerful an advocate of antiseptic surgery, and will give him so high a niche in the temple of fame; upon the personal professional position which gave him the authority; upon the gifts of fortune which gave him the means; upon the gifts of nature which gave him in happy combination:

"The patient thought, the steadfast will,
Resolve and forethought, strength and skill,"

which he has laid upon the altar of suffering humanity.

We learn from the *British Medical Journal* that his estate amounted to over $300,000. He bequeathed the most of his fortune to charitable institutions, $100,000 to the Lister Institute of Preventive Medicine and $50,000 to each of four London hospitals.

In one rather peculiar clause of his will he expressed the wish that his medals should be melted up and his diplomas and manuscripts destroyed if the

University of Edinburgh, to which he has left them, considers such action desirable at any time. It is thought by his friends that this university will not consider "such action desirable" for a long time to come.

NOTES

Dr. D. W. Carrol, of Ingersoll, whose death is announced in another column of this issue, has directed in his will that after the death of Mrs. Carrol, the property on King Street, where he resided till the time of his death, shall be used as a Protestant Hospital for Sick Children, and that twenty-eight acres of land lying on the north side of the town shall be used as a public park. Maintenance of the hospital is provided for by the sale of the rest of his estate, which includes a number of valuable farms in the vicinity of Ingersoll.

The late Miss Agnes Shields, who lived at the corner of College and Major Streets, Toronto, made the following bequests by will: To the Emergency Branch, Toronto General Hospital, $95,000; Cottage Sanitarium, Gravenhurst, $5,000; Sacred Heart, $2,000; Protestant Orphans' Home, $2,000; Aged Women's Home, $2,000; New Home for Nurses, $500.

Reports of Societies

THE ONTARIO MEDICAL ASSOCIATION

The Thirty-second Annual Meeting of the Ontario Medical Association was held in Toronto, May 21-23, 1912. In point of attendance and interest shown in the proceedings the meeting was a great success, and those in charge of the arrangements should be congratulated on having prepared a programme which both medically and socially was enjoyed by all present.

The morning of the first day was devoted to a symposium on Graves' Disease. Dr. W. T. Connell, Kingston, discussed the etiology and pathology of this affection. He recounted the work done by Beebe, Rogers and others with reference to the chemical constituents of the thyroid gland and its histological appearance when diseased. Dr. Marquis, Brantford, in a short paper on Symptoms and Diagnosis made a special plea that early cases should not be overlooked, as frequently as they undoubtedly are. Dr. Olmsted, Hamilton, discussed the surgical treatment. He was of the opinion that surgical treatment was the only thing to be considered, and that the thyroid gland should be removed in this disease in the same way that the appendix should be removed for appendicitis. Dr. Macgregor, London, discusssed the medical treatment. While admitting that no drug could be said to be a specific in the disease, he thought medical measures were most important. The "rest cure" should be carried out, while medication should be practically restricted to treating symptoms as they occur. Under such a course many cases were undoubtedly cured. A short, keen discussion followed, directed chiefly towards the treatment. Dr. H. B. Anderson took strong exception to Dr. Olmsted's opinion that surgical removal was the only satisfactory treatment. He admitted that surgery played a most important part in many cases, but not all cases required such extreme measures, and many cases were of such a nature that no surgeon would operate on them. Dr. Harrison, Selkirk, the veteran member of the Association, gave a very humorous recital as to results in several cases he had had before the disease was at all commonly recognized. They had done well under medical treatment alone. Drs. W. P. Caven, McKinnon, Primrose and

Archibald also took part in the discussion. Dr. Olmsted, who replied, somewhat modified his emphatic statements in regard to surgery, and the general opinion was that the majority of cases responded well to medical measures, but that the important part surgery has lately taken in the treatment of the disease must receive proper consideration in cases not reacting favorably to medical measures alone.

On the afternoon of the first day the Address in Medicine, by Dr. William Aldren Turner, of London, England, was read by Dr. Fotheringham, as Dr. Turner was unable to be present. The address was entitled, "Some Aspects of Neurology to General Practice." After referring to the loss Medicine had sustained in the death of Dr. Hughlings Jackson, the writer described the importance of many of the more recent aids to diagnosis in diseases of the nervous system, such as the lumbar puncture, the examination of the cerebro-spinal fluid, and the Wassermann reaction. He pointed out that these were merely aids to diagnosis and that complete physical examination would practically always lead to the diagnosis in the absence of these tests. He spoke then of the use of sero-therapy and its application particularly to cerebro-spinal meningitis; the use of the Roentgen Rays was shown to be of value in cases of muscular atrophy affecting the small muscles of the hands and for the purpose of examining the size, shape and position of the abdominal organs in neurasthenic conditions associated with enteroptosis. Some interesting observations were made on the use of bromides in the treatment of epilepsy, and the history of this remedy was recounted since its introduction in 1857. Some popular misconceptions in regard to epilepsy were dispelled, such as the "growing out" of fits at certain ages. The relation of mind to body was touched upon, together with the subject of hysteria. The effect of mental impressions on the physical functions was noted. This point was also emphasized by Professor Crile in his Address in Surgery the next day. The views of Freud, Babinski, and Janet were severally set forth and the rôle of Psycho-therapeutics and its limitations defined. The paper was keenly followed by all present, and a vote of thanks was tendered to Dr. Turner for his most interesting address, although it was greatly regretted that he was unable to deliver it himself. Following a business meeting, the Association split up into sections, and the rest of the afternoon was devoted to discussions of papers on medical, surgical, obstetrical and gynæcological topics.

On Tuesday evening Dr. Herbert Bruce delivered his Presidential Address, which embraced a wide field of subjects of interest to the profession. He spoke of medical education and the higher standards recently demanded by all the better schools. The subject of medical legislation in regard to practice by Osteopaths was referred to. The President expressed the view that a person should be allowed to practise any system he pleased, so long as he had qualified himself by a thorough study of anatomy, physiology, pathology and bacteriology to be sufficiently familiar with the essentials of medicine so that he would not be a menace to the community at large. The subject of division of fees, which has been more or less before the profession for the last few months, was also dealt with, and mention was made of the fact that in general practice no larger fees are obtained to-day than they were fifty years ago, in spite of the increased knowledge and study demanded from the profession and the greatly increased cost of living.

Following the President's Address, Prof. Alexis Carrell, of the Rockefeller Institute, New York, gave an illustrated lecture on "Experimental Researches in the Surgery of the Blood Vessels and Transplantation of Tissues and Organs." This lecture was perhaps the most interesting feature of the whole meeting, and was listened to with the keenest attention by a large audience. Prof. Carrell showed how he had been able to resect portions of arteries and substitute therefor portions of the veins of other animals, how he had been able to transplant organs, such as the kidney, from one animal to the other, and graft new legs on to dogs. He spoke about the method of preserving tissues *in vitro* for months, and the possibilities this opened up for further advances in surgical technique. The whole subject was a most fascinating one and seemed to border almost on the miraculous. A hearty vote of thanks was proposed by Professor Leathes.

On Wednesday morning clinics were held in the Medical Building. A large number of rare, interesting cases were presented in all the sections. In the Medical Section a case of Sub-acute Disseminated Sclerosis following Pernicious Anæmia was shown by Dr. A. J. Mackenzie. Dr. Ira Freel, Stouffville, showed some cases of Tuberculous Adenitis treated by Ionization. Dr. W. H. B. Aikins showed a case of large Rodent Ulcer, fifteen years' duration, which had improved rapidly in the last two months under Radium treatment. Dr. G. Chambers submitted a case of Facial Hemiatrophy. A case of Tri-

geminal Neuralgia treated with Alcohol Injections was shown by Dr. G. W. Ross; a case of Leprosy by Dr. Rudolf, and skin diseases by Dr. King Smith.

In the Surgical Section cases of Spondylolisthesis and Ischæmic Paralysis were shown by Dr. B. E. McKenzie; cases of Exophthalmic Goitre by Dr. G. A. Bingham, and Dr. Rogers, of Ingersoll; Depressed Fracture of the Skull, by Dr. Silverthorn, and Injury to the Cauda Equina, by Dr. G. Wilson; several abdominal cases by Drs. F. N. G. Starr, N. A. Powell and A. Primrose were exhibited.

In the Section of Obstetrics, Gynæcology and Pediatrics an interesting demonstration was given by Dr. N. J. Sharpe, in the Pharmacological Laboratory, showing the action of various drugs upon the uterus.

The Section in Eye, Nose, Ear and Throat held an excellent meeting, with the presentation of a large number of clinical cases.

The Address in Surgery was delivered on Wednesday afternoon by Dr. George Crile, Professor of Surgery, Western Reserve University, Cleveland. Dr. Crile has addressed the Association on previous occasions, but we doubt if he has ever created such interest as by his present address, entitled "Anoci Association, a New Principle in Operative Surgery." He showed conclusively that by adopting the anoci principle—that is, the elimination of every factor which can do injury either physically or mentally to the patient, far better results in the way of elimination of post-operative shock and distress could be obtained. To this end he favored the use of morphine previous to the administration of the anæsthetic, the use of the nitrous oxide ether combination, and the infiltration of the area of the operation by novocaine in addition to the general anæsthetic. He exhibited several charts showing the results obtained by this method compared with others, and proved conclusively that by the newer method temperature, pulse and respiration following operation were decidedly better than in another series of cases treated by the early methods.

The address was received with great enthusiasm, and Dr. Crile was extended the hearty thanks of the Association, and an invitation to address the Association again.

On Thursday morning clinics were given by the staffs of the General, St. Michael's, Grace and Western Hospitals, which were largely attended by the members, and operations were performed in the various surgical clinics. The important part

that clinical work occupied in the meeting this year undoubtedly added a great deal of interest to the proceedings, and is an example that may well be followed in the future. F. C. H.

THE TWELFTH ANNUAL REPORT OF THE EXECUTIVE COUNCIL OF THE CANADIAN ASSOCIATION FOR THE PREVENTION OF TUBERCULOSIS

In reviewing the progress of the campaign against tuberculosis in Canada during the past year it will be seen that this great movement has been growing steadily over the whole Dominion. In some localities the work is being done by the societies organized for that purpose; in others by the awakened municipalities, but in those where the best results are being attained there is always co-operation between the Government, the municipality and the local societies.

Beginning in the most westerly province we find that in British Columbia there is now legislation compelling hospitals receiving Government aid to provide for the tuberculous where other provision is not made. This should do much to educate the public in their responsibility towards this class of patients. The King Edward Sanatorium at Tranquille has now arranged that advanced cases can be accommodated in the old buildings while the new institution is splendidly equipped for early cases.

Alberta has taken a great step in advance during the past year. We are pleased to note that the Premier has promised legislation to assist local sanatoria to the extent of one-quarter the cost of building and thirty-five cents per diem per patient for maintenance. Already the Provincial Medical Council has voted $2,500 towards this object, and the probability is that in the near future there will be two institutions, one in or near Calgary and the other at Edmonton.

The newly organized society in Calgary has already provided a home for the advanced cases which is now ready for the reception of patients. A letter from His Worship the Mayor of Calgary says that the local association "is taking hold of the situation with a determination to make a success, and render necessary relief to those of our citizens who are victims of the disease." The Women's Canadian Club is to be

commended for its splendid work in this movement and much is due to the women of that organization for its present success.

The Saskatchewan Government last year promised a grant of $25,000 towards a sanatorium, providing the people would raise a similar amount This has been practically accomplished already by the Provincial Association with the aid of the various local societies. A splendid site has been secured in the Qu'Appelle Valley, where building operations are to begin at an early date. Much educational work has also been done throughout the Province by the Bureau of Public Health.

In Manitoba the sanatorium at Ninette is operating successfully to full capacity. In Winnipeg they have a home for advanced cases, but purpose erecting a new one to accommodate eighty patients. A "Trudeau" home where tuberculous patients may find board and lodging is also projected. This is the first of its kind in Canada. The city board of health is doing a splendid work of an educational kind and also attends to the inspection of food, etc. Altogether Manitoba has made great advance during the past three or four years.

In Ontario there is a steady movement throughout the Province for the proper care of the consumptive and the lessening of tuberculosis. Provincial legislation granting assistance to local sanatoria has materially aided the movement. Hamilton, Ottawa, London, St. Catharines, Kingston and Brantford in the order named have fallen into line and other municipalities are moving slowly but surely. That this policy is being followed by the Provinces of Nova Scotia and Alberta is good evidence of its soundness, and as pointed out in the report of the Inspector of Hospitals, "the construction of a sanatorium in every county in Ontario would be an immense stride in the fight against tuberculosis."

The British Parliamentary Committee, recently appointed by the Chancellor of the Exchequer, to guide the Government and local bodies in making or aiding provision for the treatment of tuberculosis in sanatoria or institutions or otherwise, recommends that "the unit of area should generally be that of a county or county borough." The National Association for the Prevention of Tuberculosis in the United States also recommends the same policy. Surely it is time for more counties to wake up to their responsibility in this matter.

During the year a private philanthropist has donated $50,000 for a local sanatorium in Ottawa to complete the equipment there. This will place the capital city in an enviable position regarding the care of its tuberculous patients.

The Berlin municipal council has purchased a house and farm, which the local anti-tuberculosis society purpose converting into a sanatorium.

Oxford County has united with Middlesex and the Queen Alexandra Sanatorium at London will take over their patients for the time. The London Association has also started a branch dispensary in St. Thomas, as the county of Elgin has also united with them in this movement.

The Brant County Association has had a beautiful site donated to them by one of Brantford's citizens, upon which they are to commence at once the building of a home for advanced cases. For this purpose they have already raised more than twenty thousand dollars, and the county council has voted 25 per cent. of the cost of maintenance while the municipality has voted the other 75 per cent.

The Kingston Health Association is now erecting an institution for the care of the tuberculous there.

St. Catharines has already its institution, and Hamilton, London and Ottawa are all on a sound basis for the proper control of the situation in their respective cities.

The three institutions at Gravenhurst, the Muskoka Cottage Sanatorium, the Muskoka Free, and the Minnesaska, for incipient cases, the institution at Weston for advanced cases, and the Heather Club Pavilion for tuberculous children at the Lakeside Hospital Grounds, Toronto, complete the list for Ontario.

There are now four dispensaries in Toronto, and the Health Department, as will be seen in the local report, has six nurses under its control. The department attends to the disinfection of houses, examines sputum free of charge, and already has some eight hundred cases under its supervision.

At the last session of the Ontario Legislature it was enacted that no general hospital receiving Government aid may refuse cases of tuberculosis. This will mean that where there is no special provision for the tuberculous they must be provided for by already existing hospitals. This most necessary and just legislation ought to do much to dispel the needless fear of infection from properly supervised tuberculous patients. The hopeful outlook of all this work is the decrease in the death rate from tuberculosis in this Province year by year.

In Quebec the report of the Royal Commission last year has had the effect of stirring up more interest in the movement. During the year there has ben a successful campaign for funds

to open the Mount Sinai Sanatorium for Hebrews at St. Agathe. The opening of the fine new Laurentian Sanatorium also in St. Agathe and the promise of one hundred thousand dollars from a Montreal citizen towards the building of a home for advanced cases there are the outstanding features of the year's progress. The Royal Edward Institute still continues its splendid work. The Grace Dart Home provides for a limited number of advanced cases. The Bruchesi Institute, one of the newest dispensaries, reports much work being done, and with the press continually keeping the matter before the public as they have been doing recently, we may soon hope for great advances being made throughout the province in the near future.

(The Dispensary at Quebec, the Preventorium at St. Agathe, and the Lake Edward Sanatorium practically complete the present equipment.)

In New Brunswick the various local societies are doing educational work, but the Dispensary in St. John is the only institution available there for practical work. The site for a sanatorium, however, has been chosen, and it is expected that in the near future one will be erected.

In Prince Edward Island there is also a dispensary in Charlottetown, but no provision for the tuberculous on the island. There has been an active educational campaign throughout the province, however, which is certain to bear good fruit in the near future.

In Nova Scotia the steady educational work which has been going on throughout the province for the past few years is beginning to prove its value. A provincial delegation waiting on the Government was recently promised legislation to assist local sanatoria to the extent of one-fifth the cost of building and $1.50 per week for each patient for maintenance. Already the counties of Cumberland, Inverness and Cape Breton purpose erecting institutions. The Government has also promised to enlarge and equip the institution at Kentville.

The Tri-County League continues its splendid campaign of education. They have distributed 16,000 volumes of a well-written book on tuberculosis, and are now preparing a second edition of 26,000 for free distribution. They purpose erecting a sanatorium as soon as sufficient funds are available, and Lord Strathcona has already shown his interest in the movement by a donation towards that object.

Sydney and Colchester Counties both have active associations with visiting nurses, while the Halifax Society is making

great efforts to make suitable provision for the advanced cases in that city.

Altogether the progress of the campaign throughout Canada is very promising. Although we have as yet but a "five per cent. equipment" it is far better than the "one-half per cent." equipment of ten years ago, and this improvement is due in a large measure to the interest created in the subject by popular education. Ten years ago there was but one institution in Canada with accommodation for less than 100 patients for the tuberculous; now there are over twenty with a total accommodation for over one thousand. Ten years ago there was but one society in Canada, now there are over 100 local societies. Then we had no dispensaries or visiting nurses, now there are over a dozen of the former and visiting nurses in many towns and cities throughout the Dominion.

Our Association has this year distributed over two hundred thousand leaflets, eight thousand annual reports in English and 2,500 in French, and we are printing and distributing leaflets in English, French, Yiddish and Galician, while we have just recently made arrangements with the insurance companies to co-operate with them in the matter of distributing literature to their policy holders. Our lecturers also still continue their work and cover a wide territory every year.

Although this brief summary deals largely with the special agencies at work it must not be supposed that the mere multiplication of hospitals, sanatoria and dispensaries, however necessary, are sufficient weapons against tuberculosis; for, while the proper care of the tuberculous is of the utmost importance and the segregation of advanced cases imperative, yet consumption cannot properly be controlled until we improve those conditions favoring spread of the disease.

We must have pure food, water and clean milk, proper ventilation and light in the homes, schools and workshops, and unsanitary conditions so prevalent in many of our cities and towns as well as our farms must be improved and better housing conditions must prevail if our present great annual death rate from tuberculosis in Canada is to be materially and permanently cut down.

Since last March, our Secretary, Dr. Porter, has addressed meetings in the following places:—

Toronto, (4) Ont., Lucknow, Ont., *Goderich, Ont., Wingham, Ont., Meaford, Ont., Collingwood, Ont., Sarnia, Ont., *Watford (2), Ont., *Fort William (2), Ont., Ottawa, Ont.,

Preston, Ont., Peterborough, Ont., Hamilton, Ont., *Edmonton (2), Alta., Wetaskiwin, Alta., Strathcona (2), Alta., Red Deer, Alta., Calgary (4), Alta., *Claresholm (2), Alta., Macleod (2), Alta., Lethbridge, Alta., Halifax (2), N.S.

New societies were organized in those places marked with an asterisk.

Special Institutions and Societies addressed were:—

Lambton Medical Society; Conference on Charities and Correction, Hamilton; Edmonton High School; University of Alberta; Normal School, Calgary; Woman's Canadian Club, Calgary; High School, Claresholm, Alta.; Canadian Club, Fort William, Ont.; Boy Scouts, Ottawa, Ont.; B.Y.P.U., Walmer Road Church, Toronto; Provincial Conference on Tuberculosis, Halifax; Y.M.C.A., Business Men's Class.

We are very pleased to state that our former secretary, Rev. Dr. Moor, has recovered his health sufficiently to have been able to deliver sixteen special lectures during the year, in the following places: Tarbolton, Fitzroy, Hawkesbury, L'Orignal, Lanark, Fallbrook, Balderson, McCue, Lowrys, Ont.; Onslow, Bardley, St. Andrew's, Que.; Dunvegan, Greenfield, Ont.; Aylwin, Kazabazua, Quebec.

Dr. Valin has also delivered two lectures for us in Montreal and Dr. Bourgeois four in Three Rivers, making in all fifty-seven special lectures under the auspices of the Canadian Association.

OFFICERS AND ELECTIVE MEMBERS OF COUNCIL, 1912-13, ACADEMY OF MEDICINE, TORONTO

President, Dr. R. A. Reeve, 48 Bloor St. E.; Vice-President, Dr. H. J. Hamilton, 220 Bloor St. W.; Hon. Secretary, Dr. Harley Smith, 57 Harbord St.; Hon. Treasurer, Dr. W. A. Young, 145 College St.; Past President, Dr. N. A. Powell, 167 College St.

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Officers of Sections—Medicine: Chairman, Dr. H. B. Anderson; Secretary, Dr. Fred. C. Harrison; Editor, Dr. A. H. Rolph. Surgery: Dr. G. Silverthorn, Dr. Warner Jones, Dr. G. Ewart Wilson. Pathology: Chairman, Professor J. B. Leathes; Secretary, ———; Editor, ———. Ophthalmology, etc.: Dr. Geoffrey Boyd, Dr. T. Alex. Davies, Dr. F. C. Trebilcock. State Medicine: Chairman, Dr. W. L. T. Addison; Secretary, Dr. M. B. Whyte; Editor, Dr. G. G. Nasmith. Pædiatrics: Dr. R. D. Rudolf, Dr. Geo. F. Boyer, Dr. J. S. A. Graham.

Personals

Lady Tupper, wife of Sir Charles Tupper, M.D., died in England, May 13.

Dr. J. N. E. Brown is now residing at 90 Charles Street East.

Dr. C. N. Holmes, of Ohsweken, has located at Edmonton, Alta.

Dr. William Oldright has returned from the West Indies after spending some months at his place.

Dr. J. R. Robertson, of Stratford, expected to sail from England for Canada, May 25th.

Doctors Simpson, Halpenny and Gorrell, of Winnipeg, are moving in May to new offices in the Sterling Bank Building.

Dr. W. O. Stevenson, formerly of St. Luke's Hospital, Chicago, has commenced practice at 909 King Street East, Hamilton.

Dr. A. S. Lawson, of the Toronto General Hospital, was elected Captain of the Senior Argonaut Rugby Club at the annual meeting, which was held May 13th.

Dr. Leonard G. Rowntree, a graduate of the Western University, London, Ont., who has been engaged in research work and as a special lecturer at Johns Hopkins Hospital for about four years, has been made Professor of Clinical Therapeutics in that institution.

Dr. R. B. Orr, of Toronto, sailed on the *Royal Edward* from Montreal, May 15th, to attend a convention in London as the representative of the Ontario Government. A number of his friends entertained him at the Gladstone, Toronto, before his departure, and the Caer Howell Bowling Club also presented him with a handsome travelling bag.

Book Reviews.

Clinical Disorders of the Heart Beat. A Handbook for Practitioners and Students. By Thomas Lewis, M.D., D.Sc., M.R.C.P., Lecturer in Cardiac Pathology, University College Hospital Medical School, Physician to Out-Patients, City of London Hospital for Diseases of the Chest. London: Shaw & Sons, 7 and 8 Fetter Lane, E.C., Printers and Publishers. 1912.

It is known to most practitioners of medicine that the study of cardiac diseases has made many new advances during the past few years. This has been due to the increased knowledge of the heart-beat obtained by means of the many instruments of precision which have come into use during that time. The interpretation of the tracings obtained by means of these instruments is not easy, and requires close study and attention over a long period. It is hardly to be expected, therefore, that the general practitioner would be warranted in devoting so much time to the study of one small group of the field of medicine. It is shown by Dr. Lewis in the book before us that the great majority of cardiac conditions lend themselves to the newer methods of interpretation by the ordinary measures of examination, with the help of a simple radial pulse tracing. He has taken up the various heart conditions with this end in view, and has given us a small volume filled with interesting and suggestive matter and which will give the reader an ample grasp of modern clinical cardiology.

Sleep and Digestion. By George Thomson, L.D.S., Honorary Dental Surgeon Royal Hospital for Diseases of the Chest, etc. London: John Bale, Sons & Danielsson, Ltd., 83-91 Great Titchfield St. W., 1912.

This is a lecture delivered to the laity and published "with the desire to disseminate common-sense views concerning health."

The Prevention of Dental Caries. By J. Sims Wallace, D.Sc., M.D., L.D.S., Dental Surgeon and Lecturer on Dental Surgery and Pathology, London Hospital; Hon. Dental Surgeon to the West End Hospital for Nervous Diseases.

Second edition. London: Published at the Office of the *Dental Record,* Alston House, Newman St. W. 1912.

Dr. Wallace's little book is so popular and so full of new ideas, that it is no wonder the first edition was exhausted in six months. Medical men know little about teeth, and still less about how to prevent caries, and this work will give them the desired information in a very short time. Not even a dentist has such a chance for doing good in the matter of advising parents how to look after their children's teeth as has a family physician, and this volume is just what he needs. If the knowledge here contained is made use of, we may confidently look forward to the day when caries will be as rare as it was 200 years ago.

A Manual of Clinical Chemistry, Microscopy, and Bacteriology. By Dr. M. Klopstock and Dr. A. Kowarsky, of Berlin, in their "Institut fur Medizinische Diagnostik," in Berlin. Only authorized translation from the last German edition, thoroughly revised and enlarged. Illustrated with forty-three textual figures and sixteen colored plates. New York: Rebman Company, 1123 Broadway, N.Y.

This English translation of a well-known German text is sure to meet with considerable favor. The field of clinical laboratory work is well covered, but all the work presented is eminently practical and does not require an expert chemist to carry out the technique. The methods of examination chosen are mostly the simplest and quickest to give the desired information. The book is quite up-to-date, and that section dealing with the detection of the spirochæta pallida and the Wassermann reaction is particularly to be noted. The illustrations are clear and well-chosen, and at the back of the book is a collection of excellent colored plates.

Sahli's Tuberculin Treatment, including a discussion of the Nature and Action of Tuberculin and of Immunity to Tuberculosis. By Dr. Hermann Sahli, Professor of Medicine in the University of Berne; Director of the Medical Clinic. Translated from the third German edition by Wilfred S. Christopherson. With an introductory note by Egbert Morland, M.B., and B.Sc., Lond., M.D., Berne. London: John Bale, Sons & Danielsson, Ltd.

We have often thought the practitioner must feel very much perplexed in reading the current literature on tuberculin. So many and varied views are presented by different writers that frequently the inference is gathered that it is too dangerous a treatment to use. The present volume presents the subject both in its theoretical and practical aspects in a most clear and explicit manner. The tuberculin used by Sahli in his observations is that produced by Beraneck, but any of the recognized tuberculins can be used. We venture to say that the reader will have a much clearer grasp of the problems of tuberculosis generally after a study of this book. It is one of the best contributions to medical literature we have seen for some time.

Obituary

JOHN WASHINGTON SMITH, M.D.

Dr. J. W. Smith, formerly of Dundas, died in Toronto, May 2nd.

WILLIAM DUNCAN MACNAB, M.D.

Dr. Duncan Macnab died at his late residence, 330 Dupont Street, May 14. He received his general medical education in Toronto School of Medicine, and the degree of M.D. at Trinity University in 1895.

DANIEL W. CARROL, M.D.

Dr. D. W. Carrol died at his home in Ingersoll, April 29, aged 76. He was born in England and received his preliminary education there. After graduating M.D. from Victoria University in 1860, he at once commenced practice, and was actively engaged in his profession for over half a century. Among his many good qualities his kindness to the sick poor was probably the most prominent. He was, however, loved and respected by all classes of the community, rich and poor alike.

Selections.

Psoriasis

Carlentini (*Gazz. degli Osped.*) describes a diplococcic organism which he has isolated from cases of psoriasis. The organism in question stains easily in acid fuchsin, gentian violet, or Giemsa's fluid. It usually appears in pairs, so as to suggest it may be tetragenic. It does not liquefy gelatine, and grows in ray form of a silvery color suggestive of the scales of psoriasis. A culture was made and injected into rabbits and guinea-pigs, but without any specific result. But when the animals were previously given an injection of 1 per cent. peptone solution and then subjected to injection with the culture, an eruption of pearly-white scales appeared about a fortnight later near the site of injection and persisted for several weeks. If the peptone injections were kept up (the idea being to induce a predisposing blood state), the eruption lasted much longer after culture injection than in the cases where only a single peptone injection was given. One of the psoriasis patients was given a culture injection without result. The author gave himself an injection in the left forearm, also without result as far as the arm was concerned, but about ten days later a parchment-like eruption appeared on the sole of the left foot, and a similar but less marked condition on the right foot. As the result of these experiments some slight support is given to the parasitic theory of psoriasis, but, in addition to the germ, specific or otherwise, there must be the suitable soil.—*B. M. J.*

Tuberculous Epididymitis

J. D. Barney (*Boston Medical and Surgical Journal*), from an analysis of the end results of seventy-one cases of tuberculosis of the epididymis, draws the following conclusions: 1. After the removal of one or both epididymes the large majority of patients are found to be in good condition and to have gained weight. 2. In two-thirds of the cases there is no demonstrable evidence of tuberculosis elsewhere than in the genito-urinary tract. When present it is most commonly found in the lungs or bones, but any organ may be attacked. 3. Renal tuberculosis rarely follows an infection of the epididymis. 4. Tubercle bacilli were present in eight out of ten urines as shown by the guinea-pig test. These urines also contained

blood and pus, while those giving a negative reaction were normal. 5. A small majority of cases have a normal urine, and no urinary disturbances either before or after operation. 6. Post-operative sinuses are found in 25 per cent. of cases, but as about two-thirds of the patients were seen during the first year after operation, and as many sinuses remain open for several months, this figure would be ultimately much reduced. The use of tuberculin after operation hastens convalescence and the closure of sinuses more than any other measure. 7. No case on whom epididymectomy was performed is known to have had a recurrence in the corresponding testicle. 8. Tuberculosis of prostate and vesicles is found in more than half of the cases. 9. In a very large majority the sexual function is undisturbed, but the semen is found to be sterile in 85 per cent. 10. A comparison of may orchidectomies with a few epididymectomies shows the latter to have resulted more favorably. It is a fact, however, that infection of the second epididymis is to be expected, with or without operation on the first epididymis, and whether that operation be epididymectomy or orchidectomy. 11. The mortality of operations for tuberculosis of the epididymis is 5.47 per cent., the cause of death being a general miliary tuberculosis.—*Medical Record.*

Acetone in Inoperable Cancer of the Uterus

Samuels (*Maryland Medical Journal*) commends the use of acetone in inoperable cancer of the uterus, on the basis of excellent results obtained in five cases. He follows Gelhorn's method:

Under anæsthesia the cavity or crater is thoroughly curetted. This is done to remove as much of the dead and necrotic tissue as possible. The curetted surface is then dried with cotton sponges. The Ferguson speculum is introduced to protect the vagina as much as possible. The patient's hips are elevated, and through the Ferguson speculum about one-half to one ounce of pure acetone is poured into the wound.

The anæsthesia may now be stopped and the patient left in this position from fifteen to thirty minutes. The acetone is now permitted to run out through the speculum by lowering the table, and the cavity is packed with a strip of gauze soaked in acetone. The speculum is removed gradually, and the excess of acetone that may have come in contact with the mucosa of the vagina is wiped off with wet gauze sponges. The surface

is then dried and a cotton tampon inserted into the vagina to absorb any excess of acetone.

After this preliminary curettage and first application of acetone, the patient may leave the hospital the next day, as she does not require any future hospital care. The subsequent applications of acetone may be made at her home or in the physician's office. They should begin about five or six days after the patient leaves the hospital, and then be made twice or thrice weekly, if the symptoms require it. With the applications of acetone there is a progressive diminution of the crater, and smaller specula may be employed. In making subsequent applications of acetone, either in the physician's office or at the patient's home, the pelvis should be elevated, as in making the first application, and about the same amount of acetone applied. If the physician is without an office assistant, the patient may hold the speculum in position. Care must be taken, however, not to allow the acetone to run over the vulva. As a precautionary method, to prevent irritation from the acetone, it is a good plan first to coat the vulva and vagina with a layer of petrolatum. After the acetone is allowed to run out, the vagina should be swabbed and a large cotton tampon, coated with vaseline introduced into the vagina before the speculum is completely withdrawn. The tampon may be removed by the patient in four or five hours.

The remote result from the application of acetone manifests itself in the marked reduction of the intense odor. The discharge, which at first is profuse and watery, gradually disappears; hæmorrhages occur with less frequency, and are not nearly so profuse. After three or four weeks of this acetone treatment, a considerable diminution in the extent of the wound cavity is noticeable. The walls become smooth and firm, and in one instance the walls were so firm that the finger could not remove any friable tissue. With the stopping of the weakening hæmorrhages and discharges, the general health of the patient for the time being improves visibly, and the pain is somewhat lessened. In two patients in whom cancer had extended to neighboring organs, while the discharge and hæmorrhages ceased under its application, the pain was not relieved, and morphine in large doses was necessary.—*The Therapeutic Gazette.*

Pain during, or immediately following the urinary act, while an occasional symptom of vesical calculus, should always direct attention to the possibility of a malignant prostate.—*American Journal of Dermatology.*

Children and Coffee.

The practice of giving coffee and tea to children is a pernicious one that doubtless has much to do, in an etiological way, with many obscure but tangible disturbances in the young, growing nervous system.

The Doctor who recognizes and appreciates this fact sufficiently to take it into full consideration in the treatment of his juvenile patients is certain of a larger degree of success as the "Children's Doctor."

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Septicaemia Due to Paracolon Bacillus

Porak (*Progrès méd.*) relates the history of a case. The patient, aged 31, first came under notice with a temperature of 39.1 deg. C., which had succeeded an attack of hepatic colic. This was shortly followed by icterus, frequent rigors, headache, cyanosis of the lips, and labial herpes. There was also present a generalized erythema occupying areas of skin not affected by the icterus. The conjunctivæ and buccal mucosa were bright yellow. The stools were greyish-white, and the liver was hypertrophied, the upper limit being the fifth interspace in the mammary line, and the lower border two finger-breadths below the costal margin. The spleen was also enlarged. The erythematous condition was most pronounced on the face and neck, and resembled a scarlatiniform rash. On the back at the points of pressure in decubitus the erythema was very intense, and appeared to be hæmorrhagic. The general condition of the patient was grave and she lay on her back utterly prostrate. The first sound of the heart was weak, and the second sound ringing in character. The respirations were 46 per minute. An intravenous injection of collargol was given, and the temperature fell almost at once. The erythema cleared up, leaving a yellow-tinted skin with furfuraceous desquamation. The icterus meantime persisted, but the patient's condition gradually improved, and after twenty-five days in hospital she was discharged convalescent. A blood culture was made on peptone broth, and an examination of this showed a number of short motile bacilli, some of them moving across the field in an undulating manner, others pivoting round one another. They took up the aniline stain well, but were Gram-negative. All the further tests undertaken went to show that they belonged to the colon group, and the author, following Renault, calls it a paracolon bacillus for the following reasons: (1) The absence of indol in the peptone media. (2) The occurrence of coagulation of milk between thirty hours and four days. (3) The production of gas in carbonated milk broth. The organism in question presented these three characteristics. The author quotes a case of Wien's of a parallel character, in which there was an infective cholecystitis, followed by a colon bacillus septicæmia. The condition of septicæmia in the course of hepatic lithiasis is particularly interesting, and helps to confirm the view that the infective element plays an important role in the appearance and evolution of biliary lithiasis. The cure of the case referred to, the author suggests, may have been due to the injection of collargol; certainly the temperature fell and remained normal afterwards.—*B. M. J.*

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Soft Chancre

Gougerot (*Paris Médical*) avers that practical experience does not confirm the classical descriptions of this lesion, and draws attention to the gravity of the accompanying adenitis, which often proceeds to suppuration while the chancre is healing, and frequently does not appear till the chancre has vanished, but then goes on to intractable suppuration, even to phagedena. Mixed chancres are common, and syphilis may escape diagnosis owing to the phenomena accompanying the soft chancre. Soft chancre is extremely contagious and autoinoculable. The adenitis or bubo is invariable as a sequela, and is what demands careful treatment. Gougerot advises absolute rest at first, with local applications of collargol, or blue ointment with petrolatum. If it suppurates, do not incise at once, but inject iodoform ether, mercury benzoate, or nascent iodine water. The puncture should be made with a thick needle, not a trocar, and at the border of the bubo, not in the centre. Any liquid injected should be reaspirated and not allowed to remain. A compressive dressing should follow, and a new injection made next day at some little distance from the first. These measures may obviate the necessity for incision. If this becomes imperative, it may be done with a bistoury, followed by washing with silver nitrate, one to 100, or a paste composed of zinc nitrate, one part, zinc oxide, 10 parts, water, q. s. Powder subsequently with dermatol. If a phagedenic action begins, hot air cauterization may be tried, or the thermocautery under anæsthesia, or one of the following chemical caustics may be used: Copper sulphate, 33.3 per cent., camphorated phenol, camphorated salol, camphorated naphthol, resorcin, one in 10, Labarraque's solution, one in 25, methylene blue, in powder, or 15 parts to 100, pyrogallic acid, etc. Ricord had great confidence in the tartrate of iron and potassium in a solution of one to 16.66. The number of agents recommended, however, shows how untrustworthy they are. Between these caustic applications, local baths are administered, alternated with compresses of zinc chloride, one to 1,000, or Finger's paste, beechwood creosote, 10 parts, calcium sulphate, 50 parts. Sterilized radium mud has been used with apparent benefit. Redundant flesh will have to be clipped away, and drainage may be required. Internally, a tonic should be exhibited, of iron, arsenic, and quinine. Under exceptional circumstances a more serious operation will be required, deep scraping with a curette, cauterization with zinc chloride, all under general anæsthesia.—*N. Y. Med. Jour.*

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Miscellaneous

Children should not be allowed to drink tea or coffee on account of the disturbing action on the nerves and heart of the alkaloid, caffeine.

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Postum, the well-known food beverage, contains no coffee—only the wholesome elements of clean, hard wheat, roasted, and a small percent of pure molasses. Children may drink freely of Postum, which, with good cream, affords them an agreeable, warm drink, devoid of harmfulness, but on the other hand healthful and nourishing.

Let the children have all they want of Postum while their young bodies are growing and their nervous systems are getting "settled."

Plasmodial Anaemia

In spite of the modern theory of the etiology of malaria and malarial affections (mosquito-borne infection) this plasmodial disease continues to be rife in certain sections of the country and bids fair to be, like "the poor," "always with us."

Every physician of experience appreciates the principles which should guide him in the treatment of the various acute manifestations of paludal poisoning, i.e., the destruction of the plasmodial hosts which have invaded the blood and which, if not eliminated, consume and destroy the red cells, the vital element of the circulating fluid.

When this purpose has once been accomplished the patient is but partly cured; the damage done to the red corpuscles must be repaired and the vitality of the blood restored, if re-infection is to be avoided. If there is any one condition in which direct hæmatinic or blood-building therapy is positively indicated it is in Post-Malarial Anæmia. As soon as the febrile period has passed, iron, in some form, should be given in full dosage. Pepto-Mangan (Gude) constitutes the ideal method of administering this essential blood-building agent in this as well as in any anæmic condition. Both the iron and manganese in Pepto-Mangan are in organic combination with peptones and are therefore easily and promptly absorbed and assimilated without causing digestive derangement or producing constipation.

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Laboratory demonstrations may prove the purity, or the component parts of a product but by therapeutic application and clinical observation, must its true value as a remedy be determined.

Upon the basis of clinical manifestation of dependable uniformity, the value of antiphlogistine has been established and most generously acknowledged by its extensive employment.

In inflammatory and congestive conditions, antiphlogistine has proven of particular service and as a seasonable suggestion, its application thick and hot, well protected by suitable covering, to sprains, strained or stiffened tendons so prevalent during vacation time, will afford the patient relief from pain and an early use of the part."

Treatment of Erysipelas

Dr. Thoden van Velzen (*Munch. med. Wochensch.,*) states that in many years of practice he has not lost a single case of erysipelas under his method of treatment. In light cases he recommends painting the erysipelatous area every hour with acid carbol. liq., 15 min., ol. terebinth., 1 oz. Severe cases in which the disease spreads over one-half of the body are treated with dressings soaked in sublimate solution or preferably in absolute alcohol. Internally he administers camphor water, one tablespoonful, three times daily, and also collargol, 15 grains twice daily in enema. The applications of alcohol are usually made twice daily, but can be used more frequently if necessary. —*International Journal of Surgery.*

The Etiology of Lupus Erythematosus

From an exhaustive study and review of the disease and its literature, Freshwater (*The British Jour. of Derm.*) draws the following conclusions:

(1) Characteristic examples of the two main varieties of the disease differ in so many respects that it is difficult to conceive that they have a common cause.

(2) In view of our imperfect knowledge concerning the etiological factors in skin diseases, we are not in a position to state that all eruptions apparently alike must be due to a single cause.

(3) There is not sufficient evidence, clinical, histological, or bacteriological, to show that lupus erythematosus is always a tuberculous lesion.

(4) The supervention of the disease on local injury to the tissues, as in the case of frost-bite, sunburn, etc., strongly suggests that a purely local cause is at times responsible for its occurrence.

(5) A large number of cases suffer from some anomaly of the circulation, so that the skin may be unable to bear an increased strain such as might be produced by a toxin circulating in the blood.

(6) That the exact nature of the toxin or toxins is uncertain.

(7) The primary involvement of the blood-vessels, together with the symmetrical distribution of the eruption in the majority of cases, favors the supposition that the causative agent acts through the blood-stream.

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(8) The involvement of the flush area of the face, which is so frequently met with in this affection, can be readily explained by the slowing of the blood-stream and diminished resisting power which the paretic vessels offer to the hypothetical toxin.

(9) That cases of lupus erythematosus and certain varieties of erythema multiforme are closely related.

Lupus erythematosus, therefore, is probably a condition brought about by some injury to the skin in a subject with a feeble circulation, to which may be added some poison circulating in the blood, such as the tuberculous, the rheumatic toxin, or products arising from faulty metabolism of the liver, kidney, uterine disease or digestive tract.

A New and Promising Agent for the Treatment of Rheumatism

An announcement that is certain to cause widespread interest among the profession is being made in medical journals in behalf of Rheumatism Phylacogen. The new product is a bacterial derivative originated by Dr. A. F. Schafer, of California. The term "Phylacogen" (derived from two Greek words—the equivalent of "a guard" and "to produce") means "phylaxin producer," phylaxin being a name that is applied to a defensive proteid found in animals that have acquired an artificial immunity to a given infectious disease.

Rheumatism Phylacogen (Schafer) is a sterile aqueous solution prepared from a large variety of pathogenic bacteria, such as the several staphylococci, streptococcus pyogenes, bacillus pyocyaneus, diplococcus pneumoniae, bacillus typhosus, bacillus coli communis, streptococcus rheumaticus, streptococcus erysipelatis, etc. The basic phylacogen is a "polyvalent" preparation, since the organisms are obtained from cultures made at frequent intervals and from a variety of sources. To this basic material is added an equal amount of the filtrate obtained by similarly growing and treating the streptococcus rheumaticus of Poynton and Paine. The product is indicated in all cases of rheumatism, acute and chronic, not due to gonorrhœal infection. It is marketed in sealed glass vials of 10 cc. capacity, and may be administered subcutaneously or intravenously, the former method being preferred except in cases in which quick results are demanded.

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in many of the leading hospitals, as well as by competent specialists and other scientific men in various parts of the country, and is said to have shown brilliant results in a large percentage of cases. With the co-operation of Dr. Schafer, and in accordance with his methods, it is prepared by Parke, Davis & Co., in whom are vested the sole rights of manufacture and sale. Physicians who are interested in this new treatment for rheumatism, and every general practitioner ought to be, will do well to get descriptive literature on the subject. It may be obtained by addressing the manufacturers at their principal laboratories in Walkerville, Ont. Ask for the "Rheumatism Phylacogen Pamphlet," and mention this journal.

Surgical Treatment of Acute Pancreatitis

Professor W. Koerte of Berlin (*Archiv f. klin. Chir.*), has operated on 34 of 44 cases of acute pancreatitis, with 18 recoveries. Attacks of pain in the epigastrium had previously been present in the majority of cases, although they were not characteristic, since they could have been due to gallstones, cholecystitis, duodenal or gastric ulcer. The acute stage of the disease usually set in with violent epigastric pain, eructations, vomiting, as well as a tendency to collapse. The only symptom to some extent pathognomonic was a tender resistant area in the epigastrium. The Cammidge reaction proved of little value in the diagnosis of acute pancreatitis, which is always doubtful. As regards the operative prognosis, surgical intervention during the acute inflammatory stage gave better results than in the stage of complete necrosis. The pancreas is best exposed through a median incision in the epigastrium after division of the gastro-colic ligament. Drainage may be carried out by inserting a gauze strip or tube down to the surface of the pancreas, but it is preferable to open up the pancreatic tissue by blunt means and insert a drain into the gland. Any sloughs are to be removed with forceps. In seven of Koerte's cases the pancreas was exposed by a lumbar incision with five deaths, the disease being already in the stage of suppuration and necrosis. In the after-treatment the occurrence of severe secondary hæmorrhages of the wound cavity is to be considered, since six of the cases succumbed to this complication, while recovery followed in one instance in which the bleeding was arrested by tamponade.—*International Journal of Surgery.*

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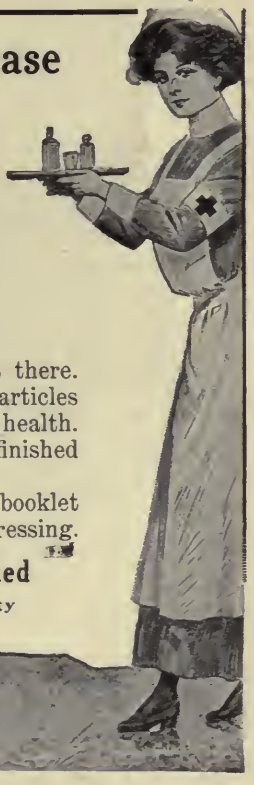

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Therapeutic uses of the Aniline Dyes

Otto Sachs (*Wien. klin. Woch.*) has had under observation a number of cases of skin affections due to working with aniline dyes. A printer, who had worked with aniline dyes (azo-triphenylmethan dyes) for nine months suffered from papilloma-like excrescences on the face and arms. Two painters, who had worked with chrome green and yellow mixed with turpentine, developed in addition to turpentine dermatitis a papulo-verrucous rash. A woman, who worked with wools dyed with aniline dyes, had a verrucous eczema of the backs of the hands and fingers. In some of these cases the presence of the aniline material in the tissue was histologically demonstrated. The author has carried out a series of experimental observations on rabbits. In the first series of experiments various aniline dyes were rubbed in at different intervals of time on the inner surface of the ears of rabbits. Histological examination of the skin later gave in a large number of the cases the same results, namely, that there was spread of and proliferation of the rete Malpighii, as well as increase of the sebaceous glands, and frequently a verrucous or epithelioma-like appearance. Control experiments with white lead, Berlin blue, cinnabar, and sienna were negative. In a second series of experiments the author repeated Fischer's experiment of making subepithelial injections of scarlet red oil into the ears of the rabbits, and confirmed Fischer's result that the injections caused overgrowth of epithelial tissue. The author obtained the same results with aniline dyes chemically quite different from scarlet red oil. Fischer first in 1906 suggested that the aniline dyes might be of value therapeutically. Schmieden first made use of scarlet red as an 8 per cent. ointment for granulating wounds and chronic ulcers of the leg, etc., and obtained good results. Later many different workers have recorded similar results. The author has found a 10 per cent. ointment of azo and triphenylmethan dyes to be of value in cases such as those treated by Schmieden. He finds that brilliant red, either in the form of a 10 per cent. ointment or as a powder, excels scarlet red in rapidity of action. The author comes, therefore, to the conclusion that effect upon epithelial tissue is not specific to scarlet red, but is shared by other aniline dyes.—*B. M. J.*

The Canadian Practitioner and Review

Vol. XXXVII. TORONTO, JULY, 1912. No. 7

Original Communications

GRAVES' DISEASE*

By J. W. Crane, M.D., Wallacetown.

My first duty is to thank you for the honor you have bestowed upon me in asking me to read a paper before your Association. The honor I believe is unique in the history of your organization, since this is the first time you have been addressed by a country practitioner.

During the past year four cases of Graves' Disease have come under my notice, and a short history of these cases with some comments on the disease no doubt will be of interest to you. It is to be hoped that a lively discussion will follow which will be productive of more good than the mere reading of the paper.

Miss M., aet. 35, seen in consultation with Drs. Shurly and Ballin at the Woman's Hospital, Detroit, exhibited the typical symptoms of the acute toxic form of exophthalmic goitre. She complained of dizziness, palpitation and an intense fear of impending death. Diarrhœa and vomiting, delirium, with a pulse rate from 140 to 160 were the most prominent symptoms. Exophthalmos was present in a moderate degree. The thyroid gland was enlarged especially on the right side. Blood examination showed a relative increase in the lymphocytes and a decrease in the polymorphonuclears. Albuminuria persisted for some time. A serum prepared by Beebe, of New York, acted beneficially at first, but soon was without effect. She gradually recovered under a modified Weir-Mitchell treatment. Ten months later she complains of palpitation if she hurries, and a poor memory. She

*Read at the St. Thomas Medical Association, May 10th, 1912.

has regained her normal weight, the pulse rate is under 80, although the goitre has not lessened much in size.

Case 2.—Mrs. G., of Dutton, aet. 59, came into the office with the history of cough and night sweats and palpitation following an attack of influenza three months previous. The flushed cheek, the temperature of 99.6 and the cough, together with the loss of appetite were strongly suggestive of phthisis. She had been under treatment with cod liver oil, etc., but the loss of weight had been progressive, amounting to over 30 lbs. Examination of the chest was negative except for the rapid heart action, the pulse rate being 118.

Tremors of the fingers and tongue, a right-sided goitre and pigmentation of the arms and chest were noted. She had been subject to the "blues" for the past 20 years and had been confined to bed at intervals for her nerves. Head pain, always worse in the morning. A possible ætiological factor was the history of six miscarriages since her last child was born. Under treatment she has gained in weight, the tremors disappeared and the pulse rate is as low as 86.

Case 3.—Mrs. G., of Rodney, aet. 35, had been under treatment for 18 months for a nervous heart. She gave the history of having had three miscarriages at short intervals and since then has complained of weakness, throbbing in the neck, pain in the back of her head and down the right side. She is easily depressed and has crying spells. She always feels worse in the morning and suffers much more pain when menstruating. On examination the pulse rate was 118, temperature 99.2, tremors present in the fingers and tongue, a moderate-sized goitre and no exophthalmos, pigmentation of the chest and arms. She had lost 19 lbs. in weight. Under treatment she has improved greatly, although she is not well yet.

Case 4.—Mrs. W., aet. 30, came into the office complaining of palpitation of the heart. The exophthalmos was so marked that the disease was readily recognized. Goitre and tremors were noted. Five years ago she had taken the rest cure for her nerves and had enjoyed fair health until she had a miscarriage. Since then she has become very nervous and shaky and her heart throbs. Later she developed mental symptoms and is now practically a confirmed invalid.

The most constant symptom present in these cases was the tachycardia, and Trousseau makes the statement that a persistent pulse rate over 100 without apparent cause is sufficient to diagnose Graves' Disease.

The exophthalmos was absent in two cases, and only marked in one case. This must be a fairly common experience since the

tendency is to drop the term exophthalmic goitre and use hyperthyroidism.

The cause of the symptoms in this disease is an increased secretion of the thyroid gland. As to the cause of this increased activity, all are not agreed. Some believe it is the result of nervous influences such as worry, shock, etc., others again try to prove the trouble arises within the gland itself. Crile in an address on the phylogenetic relationship of Graves' Disease at the Ontario Medical Association last year showed from experiments on rabbits that fear produced all the symptoms of Graves' Disease. The animal prepares for battle. What happens? The eyes bulge out, the heart beats violently—the contracted muscles begin to quiver, and finally a cold sweat. Examination of the rabbit's blood showed an increase of thyroiodin, and even in some cases enlargement of the thyroid. Two foxes were chosen for experiments, one shut in a box and frightened by the hounds, the other was allowed to run and was caught after a long chase by the hounds. Both foxes were killed and examined post-mortem. The brain cells of the fox shut up showed marked degeneration, while the fox that ran away was able to oxidize the secretions of the thyroid thrown into the blood, and so the brain cells did not suffer as much. He also made the interesting observation that any animal devoid of fear cannot fight or seek safety in flight.

Much valuable work has been done by Kocher and others on the blood changes. There is a great increase in the lymphocytes and a decrease in the polymorphonuclears, usually with a total decrease in the number of the leucocytes, a condition of leucopænia. The coagulation time is increased. The investigation of the blood, therefore, is of considerable value in the diagnosis of doubtful cases and can be used as a guide in deciding if a patient has been cured. For instance Ballin reports a case with a polymorphonuclear count of 42.7% and a lymphocyte count of 55%, three days before operation. Three days after operation the polymorphonuclear count was 69.7% and the lymphocyte 30.3%. Ten months later the blood picture was unchanged.

The treatment in the hands of the physician is entirely symptomatic. Forchheimer is optimistic in the use of quinine hydrobromide and ergotin. Others get as good results from belladonna bromides, digitalis, etc. MacKenzie in his text-book on the heart strongly recommends cold baths. A modified Weir-Mitchell treatment is of great service.

The Royal Society of Medicine instituted a debate quite recently among the Medical, Surgical and Anæsthetic Sections on

the treatment of Graves' Disease, and I can conclude this paper in no better manner than by quoting a few extracts from the report of the proceedings.

Sir Victor Horsly satisfies himself that the patient has had many months of medical treatment before operation.

Hale White traced 200 cases occurring in Guy's Hospital from 1888 to 1907. An actuary had shown whereas the tables of 20 insurance offices gave the mortality for such ages of healthy persons at 5, the mortality among these cases not operated on was eight. In the future when the operation has been made safe the object of operating would not be to prevent the patient dying from the disease—for the disease did not kill many—but because it would get the patient well quicker and more perfectly than medical treatment got them well.

The statistics of Albert Kocher, of Berne, gave 86% of operations beneficial (and 45% completely cured), 8% results not satisfactory and 5% recurrences. He states that if all patients were operated on shortly after the outbreak of the disease all might be cured by operation.

A. E. Barker, Surgeon University College Hospital, thinks a strong case has not yet been made out for the operative treatment of Graves' Disease.

Jas. Berry concludes (1) the operation is always serious, even dangerous; (2) the danger greatest in the acute cases and where degeneration of the heart is present; (3) Considerable judgment is required in estimating the exact amount of gland to be removed.

IMPRESSIONS OF THE NINTH INTERNATIONAL RED CROSS CONFERENCE

By G. Sterling Ryerson, M.D.C.M., L.R.C.S.E.

To most people the name Red Cross suggests mercy, charity, relief and unselfishness, but few know how it took its rise or by whom it was founded. In the year 1859 Henri Dument, a Swiss gentleman of some private fortune, was travelling in Northern Italy and happened to arrive at Solferino the day of the great battle between the French and the Austrians, when 36,000 men were put hors de combat in a few hours. The medical arrangements were entirely inadequate to meet the horrors of the situation. Dument soon afterwards startled Europe with his book "Souvenirs of Solferino." He devoted his life and fortune to the alleviation of suffering in war, and travelling from Court to Court at length arranged for the Conference of Geneva, which was followed by the International Convention of 1864, by which the civilized nations of the world pledged themselves to protect the sick and wounded and hold the medical staff immune to capture. Dument exhausted his means in this work and disappeared from public view. A few years ago he was discovered passing an uncomplaining existence in an almshouse, from which he was rescued and pensioned by the Emperor of Germany.

Each country has its National Red Cross Society and an international committee has its permanent headquarters at Geneva, whence once in five years it summons delegates from the national societies and governments to meet in conference at a designated place for discussion of matters of interest.

Having been appointed for this purpose, I proceeded to Washington to attend the ninth international Red Cross conference, on May 7th, as representative of the Government of Canada and the Canadian branch of the British Red Cross Society. In all thirty-two nations sent representatives to the conference, at which the writer had the honor of being elected a secretary and a member of the "bureau," or Committee of Management.

A great range of discussion took place upon many of the projects submitted, as follows: Extension of the work of the Red Cross in war; tracing of the wounded and dead; parcel delivery for the sick and wounded; assistance to soldiers' families in war and when called up to serve with the colors; protection of the

Red Cross as an international emblem; misuse of the Red Cross (as a trade mark); extension of the work of training men and women in first aid and home nursing; training of miners in first aid; report of the German Society's work in fighting tuberculosis; report of the work of the Italian Society in fighting malaria; report of the American, Japanese, Italian, French, and other societies in national disasters, such as floods, fires, famines, earthquakes, mining disasters, and cyclones.

It was stated that the American Red Cross had given aid in nine great fires, seven serious floods, five mine disasters, four earthquakes, three cyclones, the cholera epidemic in Tripoli, and Mount Teal eruption in the Philippines. There are 1,048 Red Cross training schools in the United States, 26,500 nurses in training, and 7,000 graduates and 150,000 pupils in first aid; $169,000 has been sent to relieve the China famine since January 1st last. The conference was overwhelmingly in favor of varied work in time of peace, as without it the work would die of inanition and lack of public interest in time of war.

Discussions took place on aid to sick and wounded in time of civil war and insurrection, but the proposition was withdrawn owing to the development of strong opposition to it.

It was resolved to extend the work of the national societies to prisoners of war, as at the present no one interests themselves in their welfare.

A public demonstration was given of first aid work by policemen, soldiers, sailors, miners, and graduates in first aid, which was most successful.

An artificial mine explosion was made, showing the method of extricating the entombed miners.

The competition for the Empress Marie Feoderovna prizes resulted in first prize for an automobile X-ray apparatus for use in the field; second, a bicycle stretcher; third, a folding stretcher.

The Empress of Japan donated 100,000 yen to promote the work of the Red Cross in time of peace, the prizes to be paid out of the interest of this sum every five years. A committee was appointed to determine the exact form this work should take.

It was resolved to establish a fund to commemorate the life-work of Miss Florence Nightingale, to take the form of medals and diplomas for special service in nursing. Sir John Furley was appointed chairman of this committee.

The delegates were most hospitably received and entertained, including a reception by the President of the United States at the White House.

The impression conveyed to my mind was of a noble and disinterested body of men and women, representing many nations, working together in the spirit of purest philanthropy. The medical profession was numerously represented, but so, also, was the legal; indeed, the guiding spirits were lawyers—M. Ador, Hon. Elihu Root, and others. In short, it was a layman's medical convention.

THE INTERNATIONAL COLLECTIVE INVESTIGATION OF OZOENA*

By D. J. Gibb Wishart, B.A., M.D.C.M., L.R.C.P. Lond.
Surgeon for Diseases of the Throat and Nose and Ear, Toronto General Hospital.

"Ozœna, the disease characterized by slow development, and leading to atrophy, crust formation and fœtor, without ulceration, at the present day remains a mysterious disease, in spite of much laborious work by eminent investigators.

"Numerous hypotheses, instead of serving to elucidate, have lead to confusion of ideas which greatly hinders definite research. It has become more and more evident that we lack an essential basis, and that certain fundamental questions must be solved before we can enter upon the further study of this difficult subject.

"Our numerous bacteriological investigations have no foundation on which to rest until the infectiousness of ozœna is established.

"The many ingenious attempts to represent ozœna as having the characters of an inherited constitutional disease are valueless, as long as the hereditary transmissibility of ozœna is unproved.

"Infectious or hereditary? To this question laboratory research has vouchsafed no reply, nor has clinical observation of the individual yielded important proof relative thereto.

"A comprehensive question such as this is not to be settled by the examination of single individuals, but by dealing with them collectively. We must study ozœna as a disease of the people."

In the above words Professor Alexander, of Vienna, appealed last September to the Third International Laryngological Congress in Berlin, which the writer had the honor of attending as a delegate from the Canadian Medical Association, with the result that not only was the collective investigation ordered, but it has since been thoroughly organized so far as the continents of Europe and North America are concerned. The task for Great Britain and her Overseas Dominions has been placed in the hands of Dr. Brown Kelly, of Glasgow, who has associated with himself Drs. St. Clair Thompson and Logan Turner. All three of these attended the gathering of the British Medical Association in this city a few years ago, and in their hands the work will be well done.

*Read before the Ontario Medical Association, May, 1912.

This British National Committee has placed itself in communication with the various provinces of our Dominion and appointed certain representatives. Dr. Birkett, of Montreal, has charge of the investigation for Quebec and the Maritime Provinces, Dr. Prouse for Manitoba, Dr. Boucher for British Columbia, and the writer for Ontario.

Each organizer is allowed to appoint a small sub-committee, and instructed to conduct examinations in all schools, orphanages, institutions for blind and deaf mutes, homes for incurables, hospitals, lunatic asylums, sanatoria for consumptives, creches, military barracks, and all other institutions containing large numbers of persons.

It is hoped that in the above way the co-operation of such a host of workers will be secured, that the investigation will result in clearing up the difficulties referred to in the words already quoted from Professor Alexander.

Assistance will be welcome from every medical man who is desirous and capable of taking part in the work, or who has material bearing on the subject, and particularly from the medical officers in charge of the various institutions.

The next Congress will meet in Copenhagen in 1915, and the Central Committee are desirous that all reports should be in their possession within two years from now.

HOSPITAL CLINICS AND MEDICAL PROGRESS

JOHN HUNTER, M.B., TORONTO.

In the realm of medical practice we find fully as much to deplore as is to be found in any other sphere of human activity. We censure the farmer for allowing his farm to become impoverished, the grade of grain to depreciate, and his flocks and herds to degenerate. We have no words of commendation for the merchant or manufacturer who lags behind by clinging to antiquated methods, nor can any words of praise be spoken of those engaged in the vocation of medicine who are not seeking to elevate its standard.

There are men on the staff in every one of our hospitals, and also in the ranks in private practice, whose knowledge, experience, and character qualify them for work that would be of great value to the medical profession and, through it, to the public. These men are allowed to go on, all through life, in the routine of ordinary duties without ever being asked by their confreres to assume the responsibility of leadership. Herein is one of the many tragedies incident to medical practice. The world is appalled at the wreck of a great vessel, such as the Titanic, but what about all the suffering and misery, as well as the large number of deaths, the more or less direct result of the want of more accurate knowledge, and of the very imperfect use made of what we know already?

Many propositions might be discussed in reference to the use that could be made of the class of men already referred to, but the writer wishes to confine the discussion to one sphere of action. In nearly all of the older medical organizations men are selected to deliver orations or addresses at stated periods to commemorate the name of some great man, or, perchance, to discuss some particular phase of work belonging to the present or to some past age. Others, like Lister, Pasteur, or Koch, were asked to expound their own research work. These men, on account of their special qualifications, were asked by their fellows to become leaders, and they assumed the full responsibility of leadership. The results that have followed the promotion of these men to their rightful place in the medical profession cannot be adequately summed up by any method of computation known to humanity. On the other hand, what would have been the loss to medicine and to the race, if their work had received no recognition? Why should we not follow this venerable custom of selecting capable men to give addresses on subjects of special interest to the general practitioner?

The following system, or some modification of it, could be carried out in any of our hospitals: Let the staff appoint a committee, whose duty it would be to select the men and the subjects. Any material in the hospital or in the private practice of any members of the staff that could be of use to these men in the preparation of their addresses might be utilized. When the papers were written they would be submitted to the committee, so that no fads or theories might be exploited that would reflect on the reputation of the hospital. The time and place to be announced, so that any reputable members of the profession could attend and hear the papers read. They would be published as the authoritative teaching of the hospitals in which they were delivered.

The benefits to be derived from the inauguration, and the successful carrying out of some such a system can be discussed from three standpoints: (1) Benefits to the profession; (2) to the hospitals; (3) to the physicians, surgeons, and specialists who gave the addresses. The great variety of subjects would furnish an excellent post-graduate course for any physicians who wished to keep abreast of the times. The system could be carried out in every hospital in the country, so that many of these addresses could be heard as well as read. The hearing and the intelligent consideration of these papers would prove a splendid incentive to medical men everywhere to assume a far larger measure of responsibility for the welfare of their patients. It is a lamentable thing for patients critically ill with an acute affection to have to be sent long distances, or have to endure an agony of suspense, until a special train has made a spectacular run with an eminent physician, surgeon, or specialist, who, on arrival, is to wage a mortal combat against the morbid hosts that have laid siege to the life of their victim; while expert stenographers look on and report the results of the conflict to the daily press. In very rare cases it may be in the interests of the patient to be removed or to have a specialist brought in, but in 99 per cent. of all acute affections there is absolutely nothing so obscure that a competent family physician should not be able to diagnose correctly, nor any reason why he should not treat the case properly. Should surgical means be needed there are no difficulties in the way to prevent any medical man, accustomed to doing his own surgical operations, rendering prompt and efficient aid. The retention of a virulent infection for several hours until outside help can be procured, and the depressing influence of the agony of suspense, militate far more disastrously against the patient's prospects of recovery than can be compensated for by the reputed skill of the city surgeon over the local one.

The benefits to the hospital in which this system was carried

out would be both great and far-reaching in effect. The reputation of the hospital being at stake, there would be a strong incentive for all the members of the staff to work together for the accomplishment of a specific purpose. The results following the evolution of an efficient surgical technique might be such as would attract attention to the hospital and make it a sort of surgical Mecca for visitors. Some method of treatment might be evolved that would greatly reduce the mortality in such diseases as pneumonia, typhoid, and hyperthyroidism, and hence the wards would be greatly sought after by those stricken with these affections. The repute of the specialists in the eye, ear, nose, and throat departments would attract crowds to their clinics. A series of orations, addresses, papers, or clinics would be a practical, effective, and thoroughly ethical method of increasing the usefulness and of enhancing the fame of a hospital.

The benefits to the physicians, surgeons, and specialists selected to give these addresses would be quite on a par with those derived by the profession and by the hospitals. The personnel of a hospital staff presents many amazing facts. Where else have the hopes and the predictions of youth met a fate akin to that found in the life of the individual members of the staff? Dr. A., who carried off all the prizes, scholarships, and medals in his class at school and university, comes into the hospital and passes through the wards unobserved by anyone save the patient or two he is attending. Dr. B., whose school and college course was marred by a long list of demerit marks and stars, rushes up into the operating room, issues orders to house surgeons and nurses, and hurriedly prepares himself for a major operation. On leaving the operating room he enters the wards, where, again, attendants and nurses are kept busy with charts and dressings. All the patients in the ward know Dr. B. His presence always creates a commotion, and his coming and going are conspicuous amongst the events of the day. Whence this transposition in standing? In the centre of the stage on graduation day; in obscurity on the hospital staff! A., on becoming a member of the staff, underestimated his own qualifications, and these were overlooked by his colleagues. B. compared his attributes with those of his colleagues and came to the conclusion that he had a chance to win in the race, while courage, industry, tact, and audacity—brazen or veiled—did the rest in procuring for him an influential position on the staff. The committee in the selection of men to deliver these addresses would discover the latent talents A. possesses and give him a second chance to make valuable contributions to the science of medicine, to bring fame to his hospital, and to earn distinction for himself.

CONTINUOUS DRAINAGE IN OEDEMATOUS CONDITIONS*

By J. B. Fraser, M.D., Toronto.

In treating Bright's, heart disease, and pregnancy we at times meet cases where, in spite of our utmost efforts, the œdema increases until dangerous symptoms, or even death, results. Now, in cases of this type results have shown that continuous drainage has a beneficial effect, by preventing the further increase of dropsy and lessening the amount of superfluous fluid, thus helping to keep the patient alive until compensation sets in or labor occurs.

The fact that we have compensation of the heart is well known, but the fact that we also may have compensation of the kidneys is not so well known. If asked whether interstitial nephritis could be cured, the former answer was "No," but to-day we can help at least 25 per cent. of our cases; for, by preventing secondary complications by drainage, we check œdema of the lung, displacements of the heart and liver by fluid, and lessen gastro-intestinal disturbance. The tubes (see cut) shown I had made especially

for my use. They are 2 1-2 to 3 inches in length, 1-10 inch in diameter; the wall of the tube is perforated freely, made of silver, with steel toecap. When inserting the tubes use strict antiseptic precautions. If the skin is frozen and incised the tubes will enter quite easily without causing much pain. Insert about two inches above the malleolus, in the subcutaneous (not muscular) tissue; put loops of silk through the rings, and secure with adhesive plaster (thus keeping the tubes in position). Use one tube in each limb, and leave until the œdema passes away, removing and cleaning if necessary. The tubes drain better if the patient is sitting or standing, but will work if lying.

The presence of the tubes does not prevent the use of the usual remedies; they aid, but do not supplant, the ordinary treatment. A patient presented at the meeting was treated by drainage eleven (11) years ago, when gallons of fluid were drained away during his three months' sickness, after which he regained his health, and is in a fair condition to-day. Other cases might be mentioned, but the line of treatment was the same, and the success following their use was satisfactory.

In closing, I would not advocate the indiscriminate use of the tubes. Only use when the œdema causes pain or is dangerous.

414 Sherbourne Street.

*An address given at meeting of Ontario Medical Association.

MEDICAL THOUGHTS, FACTS, FADS AND FOIBLES

By James S. Sprague, M.D., Perth, Ontario.

In the United States for many years the profession of medicine has, in many sections been in peaceful slumber or in indifference as regards the status of Medicine and the growth of cults, in no sense honoring medicine, or the advances of other kindred sciences and arts in keeping with the marked civilization of this age. However, it appears that there has been an awakening, caused not by the profession, but by others, and the result is as foretold by Sir William Osler, but one medical college is surviving where ten commercial college-like concerns or "institoots" had their "innings," and many of these, as enticements to applicants, bestowed B.A. and M.S. degrees to their undergraduates.

Although through the investigations instituted by the American Medical Association, many conditions concerning the work of the one hundred and fifty medical colleges, were carefully studied and fully exposed, yet it required a non-medical investigator to arouse an interest which awakens more fully the medical world. Schiller said: "Against stupidity the gods themselves struggle in vain," but the exertion in a righteous and most opportune struggle will ever have its champions, and in several American journals one may notice, more in recent years, such able defenders of honest practice, among whom Dr. William J. Robertson, of New York City, may be named, and his "Scientific Medicine vs. Quackery," published by *The American Journal of Clinical Medicine,* also by the *Journal of the American Medical Association,* fully illustrates that he and others of equal talent, of equal determination and of equal zeal are, and have been, engaged in the "Coon" hunt, and it is needless to state he names the cult coon, born in old Missouri, and the Coon-cult, born in the Hawkeye State—Iowa, in both States where "the corn is full of kernels as the colonels are full of corn,"—rivalling our own Dominion, and scarcely excelling it in its production in the last-named articles—*i.e.,* Colonels, which order of "Carpet Knights" our own National Legislature not long since was considering it advisable to bestow on many weak-kneed satellites or favorites—probably with some wealth—mostly cheap lawyers—whose experience of military life was limited to, and by the goose-step drill—even less.

"Colonel" as a title in the United States signifies nothing, equally so does the title "Doctor" have not much significance —even if honorably won, as the title of "Colonel." Our own title—that of "Doctor," by the most insane State legislative acts. giving charters to many delusive cults, has been debased to such an extent as to awaken interest among us, and in the great State universities. It may be stated that several of our Canadian universities require for matriculation the same exactions from the dental student, the pharmacy student, and others of these semi-professional orders. not considering that several American universities are, and have been, for many years, placing medical matriculations on a higher and proper level of supremacy—even an arts or science degree. If, as Gladstone says: "Physicians will become the future rulers of nations," it is advisable, too, when we consider this age is that of "reason in religion and medicine," that medical matriculants should be required to possess equal requirements to those of the few United States' universities, so well known to us who take time to notice the driftings of medical education. Especially so, if we are to give proofs that we are holding that supremacy in medicine which we, when facts are considered, are cherishing without the warrant and to the unredeemable injury to our profession's progress. If medicine as a profession, is regarded by the universities of our Dominion, as of equal standing as dentistry, pharmacy, music, agriculture, horse-collar science, and others of this order—which the ordinary man on our streets scarcely and rarely names as *professions,*—and from their students demand matriculations equal to our own, it is needless to state that the said universities are ignorant of our work in the community, and improperly considering the present or future and exalted standing of our profession, and when we consider the words of Dr. T. Clifford Albutt, F.R.S., Regius Professor of Medicine, University of Cambridge, and his words are: "Never was there a time when the study of medicine offered such visions of reward—social, scientific, and beneficent—as at the present." And I may add, to her disciples, if learned as were Sydenham, Sir Thomas Browne, Virchow, and other well known master minds and fathers in our profession; for they were the *auctores Maximae Sapientiae,* and as they, men of the highest literary and medical education, brought the highest glory and honor of the nation into it, it is now binding on us and our universities, that we uphold "that glory and honor," and require the proper authorities to arm prospective disciples with such qualifications and virtues to

verify the decision of Dr. Albutt, herein named, and for the "teeming future" which, even now, is wreathed in glory, and "glorious with visions of a full success,"—even now, when Dominion Medical Registration, of more importance than any legislation now before our law makers—is within our hopes of being successful in its accomplishment. In brief, we, as a people—Christian people—want, and sorely want, *men* in medicine. Yes,

"Give us Men!
Fresh and free and frank;
Men of thought and reading,
Men of light and leading;
Men of royal breeding,
The Nation's welfare speeding;
Men of faith and not of fiction,
Men of lofty aim and action;
Give us Men—I say again,
Give us Men"

It has been said "it is an honor, a privilege to be a physician," that is, according to good authority "one whose profession is to prescribe remedies for diseases, and who is consequently relied on as being skilled in the art of healing. Legally, a person who has received the degree of Doctor of Medicine from an incorporated institution—most frequently and most honorably—a university."

If this last statement is correct, wherein does the Osteopath, or the Chiropractic, or others of this order, have claims on the word "physician?" Are these some of those who are heralding—in defiance of our medical councils—their presence in our midst, and our councils to allow them their freedom from fines, and will blot out our names from the Register if we do not pay our yearly fees? If, to-day, a young man would ask my opinion concerning one of these cults and medicine, I would, if I had no respect for him, advise him to purchase "Osteopathy," for sale by Murray Publishing Co., "Vibratory Therapeutics," and a vibrator; call himself *Doctor*, and take to the roads. I, too, would tell him to buy an "Oxydonor," or "Oxygenor," or "Oxygenator," or "Oxypathor," or "Oxytonor"—really the first named, as it, in our Toronto newspapers has been well advertised in *The Globe* and *The Star*.

As regards this "Oxydonor," I may state that I have before me a booklet issued by The American Medical Association, 535

Dearborn St., Chicago, entitled: "The 'Oxydonor' and Similar Fakes," fully exposing this and similar fakes, ten copies of which were sent to me for ten cents. Several copies I forwarded to persons interested, or should be interested, in the publicity of this—as the pamphlet or booklet states—"gas-pipe fake." In this "fake" so named in booklet, and in the other booklets issued by the press of the American Medical Association, describing quack remedies, no M.D. is true to himself, or the editor of any medical journal true to his subscribers who does not possess these booklets—which are very cheap as regards price—and no M.D. is doing his duty to the public unless he, in the public press, lets the public know what fakirs are doing—for, we must admit, that in a righteous sense, we are our brother's keeper, and a light to him in dark places, and in danger.

One fact is this, brother: "*Qui non libere veritatem pronunciat proditor est veritatis.*" Another thought is: "Truth is truth to the end of reckoning," and if, as Depew says: "The professional man, because of his wider culture and more accurate training, is a leader in every community," then this assertion applies to *you* and to *me*.

One consoling thought to me is this—in my sixty-eighth year in life, and forty-third in medicine: "The pure joy of achievement, the calm pleasure that comes with the consciousness of a worthy task nobly done, is—if not reward enough for any man—certainly reward for any member of that—our profession; whose *proudest* distinction is that it puts the welfare of all so high above individual profit, and he who does not believe this, is unworthy of *my* or *your* regard. Let him be anathema!

"If planets have toiled, and forgotten suns have burned that *we* may live—" (that *I* may live) I shall always believe in my humble way of thinking, that I have, in my leisure, some work to do, and it shall not be for selfish interests. Yes, this work—similar to that, commenced in '69—at the request of Dr. John Fulton, in the second year of the publication of *Canada Lancet,* will, no doubt, be my diversion at playing labor, as old Burton has it—*otiasiaque diligentia ut vitarem torporem feriande, etiam ad urnam.*

"We stand before the twentieth century's slowly opening door," and it is our duty to make it more glorious than the last—even if it was brilliant; and for the great work we do not make a call for mothers' pets, dudes, or dudelets, or under-feds, dreamers, under-weights, or those whose foretops are parted in the

geometric centre. No! we want the best of the breeding. When Alexander was asked to act as one of the competitors in the Olympian games, he said he would enter the list provided he had kings as fellow-competitors and aspirants for the myrtle crown.

Brother,

"The rudiments of Empire here
Are plastic yet and warm;
The chaos of a mighty world
Is rounding into form."

And this, our age is one of reason, with the educated minority—yes, reason in religion, as well as in our profession. Yes, too, we believe dogmatism is puppyism, and moss-covered creeds as stumbling blocks to the progress of mankind, and that in medicine, in the near future—if not but few are found at present—the nations most civilized will find their leaders; and our faith is in the words of Gladstone, who said: "Physicians will become the future leaders of the nations."

Selected Articles

A CLINICAL LECTURE ON THE MYOPATHIES

By Frederick S. Palmer, M.D., F.R.C.P.,
Physician to the West End Hospital for Diseases of the Nervous System.

There are few subjects which have interested me more in the study of nervous diseases than that of amyotrophy, or muscular atrophy, in its various forms and distributions. Such cases are very commonly seen in our hospital out-patients' rooms, and elsewhere. They are not difficult to recognize, in fact, the condition is generally self-evident. Weakness and wasting are usually, though not always, synonymous terms; sometimes the weakness is associated with a definite increase in the bulk of certain parts of the musculature. For the normal nutrition of the muscles, the integrity of their *trophic centres, peripheral paths,* and *terminations* is essential; and when any of these influences are withdrawn, or otherwise interfered with, the wasting which follows is perfectly intelligible; but why some of these structures, in children or young adults, should gradually atrophy and decay without visible changes in their nervous supply, is a mystery we have not yet been able to penetrate.

Now, if we eliminate from the field the wasting of muscles which occurs from general malnutrition, trauma, senile degeneration, over-use, disuse, arthritic changes, pressure effects, functional disorders (such, for instance, as hysteria) and like causes, muscular atrophy, to which the adjective progressive is applied, can be primarily divided into two great classes.

1. That which is dependent upon, or secondary to certain ascertained lesions in the central, or peripheral nervous system.

2. That which appears to have its origin in some inherent defective vitality in the muscles themselves.

The boundary lines may not always be so sharply and clearly defined as the divisions represent, and no doubt cases sometimes occur which serve as a connecting link between them, but on the whole, I think, they are sufficiently distinct for all practical purposes.

As an example of the former class, let me remind you of chronic anterior poliomyelitis, or, as it is more frequently called,

progressive muscular atrophy (spinal) of the Aran-Duchenne type, and its allied disorder, amyotrophic lateral sclerosis, due to well-defined lesions in the spinal cord. In the latter class, Duchenne's pseudo-hypertrophic paralysis is probably the best illustration I can give you.

It is to this group—the so-called idiopathic atrophies—that I wish to direct your attention this afternoon.

Several of these cases have been under observation here during the last few months. They are comparatively rare, and are always, or nearly always, progressive in course.

A long list of titles has been bestowed on the class by various authors, some of them "words of learned length, and thundering sound." The nomenclature includes such terms as *primitive progressive myopathy, myosclerotic paralysis, distrophia muscularis progressiva, abiotrophy, muscular dystrophy,* etc. These synonyms in the vernacular, indicate failure, arrest, and extinction of nutrition in the muscles so affected.

Aetiology.—Nothing certain is at present known concerning the causation of the idiopathic muscular atrophies. They are most probably congenital, and are supposed to be the result of some defective embryological development, and tendency to premature decay. The primary pathological departure seems to be in the structure and intimate elements of the muscles. With the exception of pseudo-hypertrophic paralysis, in which males are most frequently attacked, the sexes suffer nearly equally. Excluding the simple atrophic form, more than one member of a family is usually affected. The disease has been transmitted through several generations, and by females who may not themselves be subjects of the disorder. As a rule, the transmission is chiefly through the female line. Although they usually commence in childhood, or early life, several instances are recorded when the symptoms began between 20 and 30. Consanguinity has, I think, some influence, for I have seen two series of cases in which the parents were first cousins. In both the families were large, some of the boys were attacked, but all the girls escaped.

Pathology.—In all the myopathies the morbid changes are limited to the muscles. No constant correlative lesions have been discovered in their nervous supply to account for the degenerative process. At autopsy, the muscles look pale and yellow, presenting an appearance of fatty and fibrous infiltration. The change is interstitial—the muscle fibres are diminished in size and in numbers. In more advanced stages, the increased connective tissue is arranged in bands containing only a few scattered muscle fibres and fat cells. On the other hand, several American and

some German observers maintain that the initial process occurs in the peripheral nerves, and is most marked in their intra-muscular endings. It is true that in a certain number of the cases examined, evidence of degeneration has been found in the ventral horns, spinal roots, and peripheral nerves; but usually they are normal. Possibly, if not probably, with better methods of investigation than we now possess, morbid changes in the anterior grey matter, and motor nerve cells which control the nutrition of the muscles may be found responsible for the morbid process. The principal features which clinically distinguish the myopathies may be briefly summed up as follows:

1. They usually begin at the developmental epochs, or in early life, most frequently before the age of puberty.
2. Their course is almost invariably progressive.
3. Heredity is a marked ætiological factor.
4. The larger muscles, particularly those of the shoulder and pelvic girdles, are chiefly affected.
5. Bulbar symptoms are rarely if ever present.
6. The muscles concerned in the atrophic process may be either diminished or increased in size, and these two opposite conditions may co-exist in the same subject in different distributions.
7. Sensory changes, as a rule, do not occur.
8. Fibrillary tremors are not observed.
9. The knee-jerks may be normal at first, but are never exaggerated. More commonly, they are gradually diminished, and in the later stages, when there is much wasting of the *Quadriceps extensor*, they disappear.
10. Although there is a gradual decrease in the electro-contractility to both currents, the typical R.D. is not obtained.
11. The mental condition is sometimes dull and backward, but more frequently intelligence is good.
12. The affected regions are commonly cold and cyanosed.
13. Deformities and contractures are frequent.
14. The organic reflexes are unaffected, except in the advanced stages of the disease.

Several clinical types are recognized, based on the usual period of onset, increase in volume, or the anatomical distribution of the affected muscles, but they all belong to the same common stock, and the family resemblance is preserved in each of the forms. The types described are (1) "The Simple Atrophic," (2) "The Pseudo-hypertrophic," (3) "The Infantile," (4) "The Juvenile," (5) "The Distal," (6) "Myotonia Atrophica," (7) "The Peroneal." The last, formerly described under the myopathies, and presenting many of their characteristic features, is now call-

ed "Primary Neurotic Atrophy," and classed among neural disorders. Mixed, or transitional cases are sometimes encountered, but these are merely hybrid examples of the other groups.

The Simple Atrophic type is described by Dr. F. E. Batten. It occurs in young and small made children with thin arms and legs, who are too feeble to walk, or stand alone; usually one member of a family is attacked. The muscular wasting is general and accompanied with great loss of power; owing to flaccidity and loss of tone in the muscles, the limbs can be placed in abnormal positions. Attempts at locomotion are carried out by weird crawling or dragging methods along the floor. Contractures occur in the later stages, but life is seldom prolonged beyond 10 or 12 years of age.

The Pseudo-hypertrophic type was first described by Duchenne in 1861, but the most complete and exhaustive account of the disease was given by Sir William Gowers in 1879. Isolated cases were recorded by Sir Chas. Bell in 1830, by Partridge in 1847, and by an Italian observer in 1838. The first two series of cases were published by Meryon in 1852, and by Oppenheim in 1865.

The onset is characterized by delay and feebleness in walking —many of the children have never walked properly, they fall easily, have difficulty in rising again, and in ascending stairs. They stand awkwardly, and complain of fatigue in the muscles of the legs and back. In walking the knees are raised to a higher level than normal, the feet extended, and the toes point downwards. Progression is accomplished in a lurching, swaying manner from side to side—the so-called waddling gait. When looked at in the erect position, the spine has a sacro-lumbar curve, which disappears when the body is at rest (lying down). Sooner or later some degree of firmness, fulness, or enlargement will be noticed in certain parts of the muscular system, the hypertrophy is symmetrical, and most marked in the gastrocnemii, glutei, infraspinati, deltoidei and tricipites. At the same time there is evident weakness and wasting in some of the other muscles, chiefly the lower part of the pectorales, latissimi dorsi, serrati and the upper segments of the limbs. The scapulæ are widely separated, stand out from the chest, giving the arms an apparent increase of length. If the patient be placed on his back upon the floor, and asked to rise, the manœuvring to obtain the erect position is pathognomonic; he rolls over on to his side, then on to his hands and knees (the all-fours position) "protrudes his buttocks like a dog in the act of stretching," lifts up the lower part of his body with his legs, and then gradually withdrawing his hands

from the floor, proceeds to climb up his body with his hands. Contractures of the flexor tendons of the legs come later, producing talipes equinus or equino-varus. This stage, which is very variable, but usually last from 18 months to 2½ years, is followed by one of extension and aggravation of the symptoms, the upper limbs, if not involved before, become so powerless that raising the arms even for feeding purposes is difficult. Atrophy now takes the place of hypertrophy in the muscles so affected. Sitting up in bed or a chair is at last impossible, and yet in this helpless and bedridden condition, life may be prolonged for several years. Death usually occurs from some intercurrent disease (generally pulmonary) or acute infection in early adolescence. Not many reach middle life. It is important to remember that these pseudo-hypertrophic cases run a more rapid course than the other myopathies, and that males suffer most frequently. At the clinical meeting of the Medical Society of London, held on March 25th, I showed two of these cases, one the little boy of nine you saw in the out-patients' room a short time ago, sent here by Dr. Dalloway, and his elder brother aged 15, whom I had brought to the Society in a cab from East Ham. His symptoms began seven years ago, and he is now in a very advanced stage, almost completely paralyzed in his lower limbs, which were cold, cyanosed, and presented an extreme degree of talipes equino-varus; the only possible movement was flexion of some of his toes. His spine was arched, and his body bent forward, tilting to the right side from the wasting of his back muscles; sitting upright was impossible. All the muscles of the neck, shoulder girdles, and arms were terribly wasted, the scapulæ were winged out, and widely separated. He had lost all power to raise his arms, and was unable to feed himself. When they were elevated, the body looked as if it were slipping away from his head and neck. The atrophy had extended to the lower segments of his upper limbs, and the small muscles of the hands were involved in the same process. The gastrocnemii and glutei still showed some evidence of hypertrophy. He was intelligent, quite cheerful, complained of no suffering, except when his legs were warm. His knee jerks had entirely disappeared, but the sphincters were intact.

The Infantile or Facio-scapulo-humeral type.—Duchenne first mentioned the chief peculiarity of this type of myopathy in 1869, but it was more accurately and fully described by MM. Landouzy and Déjerine in an exhaustive paper published in 1885. It is now usually coupled with their names. Some of the recorded cases appear to have followed an acute illness, or infective disease. The onset, usually about the third or fourth year, although

it may be much later, is gradual. As a rule, the facial muscles are first attacked, and according to Duchenne particularly the orbiculares. Weakness and wasting come on together giving rise to the myopathic facies—the brow is smooth, the expression sleepy and inert, whistling, blowing and puffing are badly performed, the naso-labial fold is obliterated, and the mouth has an appearance of pouting. The zygomatici are early affected, and from involvement of the orbicularis palpebrarum the eyelids cannot be completely closed. The muscles which commonly escape are those of the tongue, mastication, larynx and pharynx, the spinati, subscapulares, flexors of the hand and those concerned in the ocular movements. From the face, the disease extends to the muscles of the shoulder girdle, arms, legs and trunk. In the lower extremities the muscles most frequently affected are the flexors of the hip, glutei and extensors of the thigh. Lordosis and waddling gait are common. In advanced periods of the disease, the wasting and emaciation are often extreme, the victim looks like a living skeleton. The duration is very variable, it may last from 10 to 30 years; the termination is usually from some intercurrent disease. When the diaphragm and intercostals are involved, slight catarrhal affections assume a grave aspect. Sometimes the disease remains stationary, or limited to the muscles first attacked, for years.

The Juvenile or Scapulo-humeral type, commonly known as Erb's type, by whom it was described in 1884. The manifestations appear about the age of puberty, or in early adult life, usually before 20. The muscles of the shoulder girdle are primarily attacked, then those of the back and thigh; the lower segments are rarely involved, and then only late in the disease with the single exception of the *supinator longus,* which seems to be specially picked out. The facial muscles nearly always escape. Erb says the deltoids, spinati and subscapulares sometimes show hypertrophy. The wasting is bilateral, but not always strictly symmetrical. As a rule, the muscles selected are the biceps, triceps, supinator longus, latissimus dorsi, serratus, trapezius, and occasionally the sterno-mastoids, those of the back, abdomen, flexors of the hip, extensors of the knee, glutei, diaphragm and intercostals. The scapulæ wing out freely from the chest suspended by the levatores anguli scapulæ. Lordosis and the peculiar waddling gait are very marked in this type of myopathy. The drooping of the shoulders causes an apparent lengthening of the neck and arms. In rare cases, the atrophy begins in the legs, but the muscles below the knee, and the interossei are seldom involved. The prognosis in Erb's type is rather more favor-

able both in relation to the extension of life and the temporary arrest of the malady. Cases are recorded which have remained stationary, or have not materially altered, for 20 years or longer.

The Distal type.—Leydon, in 1885, mentioned an hereditary form of progressive muscular atrophy commencing in the distal segments of the lower extremities. The type was fully described by Sir William Gowers, with his characteristic lucidity, in 1902. At the interesting lecture he gave that year, which I had the privilege of hearing, he exhibited one case, and described the details of another that had come under his notice.

In the first, a boy of 18, without any trace of amyotrophy in the family history, the symptoms began at 12, with weakness and wasting in the legs; later, the hands became affected. Extension of the legs was performed by the calf muscles, which were firm, and presented some resemblance to pseudo-hypertrophy; his feet could be moved both outwards and inwards (unlike the peroneal type, in which outward movement is abolished). The muscles of the thigh and arms were normal. Atrophy was limited to the distal segments, the sterno-mastoids, and some of the facial muscles, particularly the orbiculares and the frontalis. The second (he mentioned) was that of a girl, aged 23, and the sixth of a large family, all girls. Three of these were attacked, but beyond the congenital tendency there was no history in previous generations, and the parents were not related. Weakness in the legs was observed at 18, subsequently the symptoms assumed the characteristics of the juvenile type in an advanced stage.

Myotonia atrophica is a name suggested by Rossolimo to signify a variety of Thomson's disease (Myotonia congenita) associated with muscular atrophy. The disease is rare, and congenital in nature. Oppenheim, in 1900, called attention to the condition. Males are said to be more frequently affected. It attacks members of the same generation, and is transmitted from parent to offspring. The distribution is irregular, and consists of atrophy of the facial muscles (myopathic facies), sterno-mastoids, vasti, and the dorsiflexors of the foot. The age of onset in recorded cases varies between 15 and 30, and the course is chronic. Histological studies show changes in the muscular fibres, but the nervous system is intact.

Besides the five recognized types I have just endeavored to give you a brief outline of, there are many other forms of myopathy, such, for instance as Zimmerlin's, commencing in the upper musculature of the thorax and arms; Eichorst's, in the femoro-tibial muscles, and the mixed or transitional cases; but it is not necessary to multiply their number. They merely illus-

trate the freaks of onset in this curious disease, varying in its distribution, different in appearance, and yet linked together by common features and family resemblance, constituting, as Charcot says, "one great class, and one morbid entity."

Primary Neurotic Atrophy.

The Peroneal type (of Charcot-Marie-Hoffmann-Tooth).—Until recently this type of muscular atrophy was included in the myopathies; but it is now relegated to its proper position among diseases of the spino-peripheral system. It was described by Charcot and Marie in 1886, also in a thesis published by Dr. Howard Tooth the same year. The atrophy is a result of a chronic form of interstitial, or multiple neuritis extending to the spinal ganglia, posterior roots, posterior columns in the cord and the anterior cornual cells. The changes are most marked in Burdach's columns. In the majority of the cases the disease begins in the lower extremities, particularly in the peroneal extensors, and in the muscles of the feet. The others which suffer are the tibialis anticus, extensor longus hallucis, extensor communis digitorum, and sometimes the gastrocnemius, subsequently the muscles of the thigh, chiefly the vastus internus. There is an early tendency to the development of pes varus, equinus and equino-varus. Gradually the muscles of the forearms and hands are invaded, giving rise to the claw-like hand. Later, it may, in rare cases, extend to the muscles of the face and trunk. The gait is steppage, and foot-drop is marked. Usually the supinator longus and the muscles of the shoulder girdle remain normal. The disease is commonly symmetrical, but may attack one side first. Pain, tenderness and fibrillary tremors are often present, and the electrical reactions frequently show degenerative changes. Trophic disturbances occur, the deep reflexes are either diminished or abolished, but the sphincters are unaffected. The usual age of onset is in late childhood, most frequently before 20. The disease develops slowly, and runs an indefinite course of years, death occurs from some intercurrent cause.

Treatment.—The resources of medicine in dealing with the types of disease we have just discussed are very inadequate. There is no known remedy in pharmacology which has any influence in arresting the progress of the malady. Attention to the general health, good generous dieting, and the administration of tonics, such as iron, strychnia, quinine, and cod liver oil may possibly, by improving the quality of the blood supply, retard the process in subjects whose nutrition has not been duly cared for; but to expect more would be inconsistent with our knowledge of

the pathology. I have not seen any good results from the employment of animal extracts. It is, however, in the highest degree important that voluntary exercise of the affected muscles should be maintained as long as possible. Such exercises should be prescribed with careful regard, and in due proportion to the muscular weakness. When these efforts are no longer possible, the rapidity of the atrophic process is very remarkable. The form of exercise is of small importance, so long as it furnishes opportunity and scope for the use of the muscles. Electricity and gentle massage are subsidiary methods, useful, but not comparable to voluntary exercise. For the contractures tenotomies are necessary, and very satisfactory results have been obtained from division of the achilles tendon; but the operation may have to be repeated. Contractures of the hip and knee are more difficult to overcome, but if these cannot be dealt with surgically, some improvement may be obtained by extension from weights carefully adjusted. In families with a myopathic history, great attention should be paid to the hygienic surroundings of the children, and mothers who are members of such families ought not to nurse their infants.—*The Medical Press.*

NEW HOSPITAL AT WESTON

HIS ROYAL HIGHNESS THE DUKE OF CONNAUGHT LAID THE CORNER-STONE OF THE NEW HOSPITAL AT WESTON, MAY 27TH.

His Honor Sir John Gibson, Lieutenant-Governor of Ontario, who presided at the ceremonies, said, in the course of his introductory remarks:

"Lord Strathcona is president of the association. I have the honor of being a vice-president, but the real head and front of the movement is Mr. Gage, who has, from the beginning of this enterprise, the Hospital for Consumptives in Muskoka, and the Toronto Free Hospital, all through been the head and front and chief executive of this great philanthropic movement."

The Duke of Connaught, he said, was not a stranger to the work of the institution. He had had laid before him facts in connection with the request to be able to use the name of the "King Edward Memorial Fund" for the movement to increase the capitalization of the institution to $1,000,000.

W. J. Gage, who followed, gave an interesting address on the progress being made in staying the ravages of the "white plague." He said:

"Standing to-day near the King Edward Sanitarium, the only hospital in Canada that our late illustrious King honored with his name, it would seem especially fitting that the foundations of this new hospital should be laid by Your Royal Highness.

"This spot has been marked by several notable events in the crusade against consumption. Upon this ground, seven years ago, was opened the Toronto Free Hospital for Consumptives for advanced and incurable cases.

"The late Sir William Broadbent, following his visit to this place, wrote in *The British Medical Journal* that the Toronto Free Hospital was the first institution in the world set apart exclusively for the treatment of advanced cases of tuberculosis.

"A fire of over a year ago destroyed the buildings of the Toronto Free Hospital, and we now stand in view of new fireproof buildings in course of construction, adjoining the King Edward Sanitarium.

"To-day, on the same grounds, we have the honor of asking Your Royal Highness to lay the foundation stone of the first hospital in the world for children suffering from pulmonary tuberculosis.

"All who take an interest in the fight against tuberculosis must feel a deep sense of gratitude at the great advances made.

"Sixteen years ago, in the beginning of the work of the National Sanitarium Association, our trustees were confronted with the greatest of all difficulties—an indifference on the part of the public, or, where there was any public opinion, it was that of unbelief.

"An editorial writer in one of the leading Toronto papers, referring to our proposal to establish a home for consumptives, expressed the thought of the day by saying these people (the consumptives) were 'under the sentence of death.'

"Since that time our two sanitaria in Muskoka and our two at this place, have been established; a great educational campaign has been carried on through ex-patients, literature, and lectures, and boards of education have recently introduced text-books into many of the schools of Canada, giving chapters showing how consumption can be cured and how prevented.

"Sixteen years ago, when we opened our first hospital in Muskoka, there was not a single institution in Canada for the care of consumptives, and only one in the United States. To-day there are 23 in the Dominion, and in this province alone there are some 15 sanitaria either completed or in the course of construction.

"Through an enlightened public opinion and advanced legislation the Province of Ontario is making special provision for its consumptive poor, and it may be confidently asserted that to-day we find in this province a greater number of sanitaria in proportion to its population than can be found in any state or province in Europe or America.

"I am sure it will be a matter of profound satisfaction to Your Royal Highness to learn that the official report of deaths from tuberculosis shows a decrease in this province of nearly 40 per cent. within the past ten years. In the United States during the same period the decrease was only 18 per cent. With all the agencies now at work, in another ten years may we not confidently hope that this decrease will at least be 75 per cent.?

"Sixteen years ago, when we opened our first hospital in Muskoka, we were able to care for 50 patients. To-day, in our two Muskoka homes, and two allied institutions here, we have 350 under treatment. Of these 262 do not pay anything toward their own cost of maintenance, and 38 pay $4.90 per week or less; and, before the close of the year, with the buildings under construction, we will have provision for 500 patients.

"Altogether a goodly army of nearly 6,000 have entered the several homes of our association, and it is safe to say of this

number who at one time were said to be under sentence of death 3,000 at least have not only had a reprieve, but a splendid liberty, as they returned to home and friends with restored health. To secure these results over $1,500,000 has been expended upon plant and maintenance.

"We believe that of all the work undertaken by the National Sanitarium Association the most important is that inaugurated to-day by Your Royal Highness in making provision for children stricken with this dread disease. We have already some 25 patients here housed in temporary quarters.

"I shall not forget a visit I had a couple of years ago to the children's ward in this place. There one of the most pitiable objects I ever saw lay in a little cot—so emaciated and wasted through her long struggle with consumption that for months she had been unable to raise her hand to give herself food. She did not raise her eyes or utter a sound. I remember, too, how my young daughter gave expression to her emotion in a flood of tears as she looked upon the silent and wasted form of the little one who seemed to be in the very grip of death. That little one (Lilian), who we thought that day was dying, and who even the nurses believed was doomed, stands with us the picture of a healthy, happy child.

"In all the acts of Jesus, as recorded in the New Testament, there is none that makes a wider appeal to the man or woman who has a sick child than the story of the raising of Jairus' daughter. Jairus, a ruler of the synagogue, brought the Great Physician to the couch of his dying daughter, and, though the multitude laughed the Saviour to scorn, He took her by the hand and said, 'Maid, arise!' 'And,' says the apostle, 'her spirit came again and she arose straightway.'

"Twenty years ago the people of this country believed a child stricken with consumption doomed to death, just as surely as the crowd in the days of Jesus laughed at the suggestion that the daughter of Jairus could be restored to life from seeing death.

"To-day we believe Your Royal Highness lays the foundation stone for an institution that will see the story of Lilian repeated a thousand-fold. Without irreverence, in no obscure sense, may we not say that the story of Jairus' daughter will be duplicated manifold in the history of this institution."

Laid the Stone.

After appropriate prayers had been offered by the Lord Bishop of Toronto, the Duke laid the corner-stone in the following words:

"In the faith of Jesus Christ, God the Father, God the Son, and God the Holy Ghost, we lay this corner-stone."

After the corner-stone had been duly laid, His Royal Highness spoke as follows:

"Your Honor, My Lord, Mr. Gage, Ladies and Gentlemen,—I am glad to have a second opportunity within a few days of expressing myself publicly on the question of the white scourge.

"The building of which I to-day am laying the corner-stone is one more tribute to the generosity and public spirit of the people of Canada. I am happy to be associated, as was my brother, the late King Edward, with the National Sanitarium Association.

"If public subscriptions, important buildings, and the interest and work of your leading citizens could stamp out tuberculosis, we should soon hear the last of that disease. But they alone will not triumph over it, though they are indispensable.

"To succeed we must overcome the apathy of the public, try to interest and instruct them, to make them take the simple precautions which science dictates for the maintenance of hygienic conditions.

An Everlasting Wonder.

"It should not be difficult to interest people in the preservation of their own lives and those of their children, but the apathy and obstinacy of the mass of the population is a phenomenon which is an everlasting wonder.

"It is now pretty well established that tuberculosis in its early stages is curable, and it is probable by the sanitarium system that the best results are to be secured. I pray that this new sanitarium may be the means of restoring to health of numbers of your citizens.

"Sanitarium treatment may be considered from two points of view, first, education, and, secondly, therapeutics, though in practice they should be complementary to each other, and are indeed indispensable. The therapeutic measures are, broadly, those which tend to diminish infection and to increase the patient's resistance. To this end the patient should be protected as far as is practicable from continued infection, and should be freed from all debilitating conditions, such as impure air and insufficient food. He should be provided with an abundance of pure air and light. He should have a sufficient amount of nourishing food. The amount of exercise and rest, the time that may be given to employment and recreation—in short, every detail of life—must be enquired into carefully and regulated according to the require-

ments of each individual patient. To these measures of treatment may be added tuberculin, etc.

"On the preventive side it is necessary that the patient should receive a sound education in what may be called the hygiene of the treatment. During the course of his treatment he should be taught the meaning and reason of the advice given, and at the same time should be instructed in the chief facts relating to his disease, its dangers, the means of its prevention, and rules of life necessary for the maintenance of his own health, and the safety of those with whom he is brought into contact. In a sanitarium frequent lectures should be given by the resident staff on these points.

"But though you have the sanitariums, do not forget, and do not let others forget, that prevention is of vital importance. Properly applied methods can stamp out the disease, and I should like to think that some day the Weston Sanitarium should stand here empty, a monument to the good sense of the Canadian public."

In introducing Hon. W. J. Hanna, who followed His Royal Highness, His Honor expressed the hope that the Government of Ontario would see its way clear to further aid the association in increasing their capitalization.

"The figures which Mr. Gage gave just now must be very satisfactory," said Mr. Hanna. "It occurred to me while those figures were being read that for those figures no government, no man or combination of men are responsible as is our good friend Mr. Gage, who read the figures. He has often been misunderstood, but no man knows how much Mr. Gage has given of his substance and of his energies to this work."

Mr. Gage's arousing of the public of the provinces on this subject, he said, had been followed by a state of alarm. This, however, led to an intelligent understanding of the situation, and the work had gone on entirely stripped of this alarm.

He expressed the hope that the tuberculosis figures would be lowered not 40, but 75 per cent.

The Government, he declared, were doing all they fairly could at present, having regard to their revenues. He took no credit for the aid they had already given; it had been the work of the persuasive deputations that had waited upon them from time to time.

Mayor Geary declared it to be a matter of pride for every citizen of Toronto that this city had taken almost a pioneer place in the work of stamping out tuberculosis. The City of Toronto was under obligation to do something to aid in the work—if not

directly, at least in giving some attention to the housing conditions, and seeing that everyone got plenty of fresh air. This was not a matter of debate.

In concluding, he paid a tribute to the memory of the late Mr. H. C. Hammond, as "one of the wisest and greatest of philanthropists."

"When we hear the voice of royalty in kindly words to the helpless poor," said Hon. William Charlton; "when we see the hand of royalty laying the foundation stone for the world's sick and distressed, we know that the day of redemption is now at hand. Amen."

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, F. A. CLARKSON, BREFNEY O'REILLY AND F. C. HARRISON.

Tabetic Ataxia

By many tabetic ataxia has been attributed solely to the sensory disturbances, and especially to loss and diminution of the sense of position. Herzog has studied the question by comparing graphic records of the movements of a segment of a limb affected with tabetic ataxia with those obtained similarly from cases in which voluntary movement was affected only by a disturbance of sensibility, and found there were very considerable differences. The most prominent difference is that in the latter cases the movements are irregular and occasionally intermittent, but in tabes when a movement is slowly performed it is frequently interrupted by a jerk in the opposite direction. This is due to an intermittent contraction of the antagonists of the contracting muscles resulting from a disturbance in the balance between the agonists and their antagonists: It is on this that the characteristic ataxia of tabes depends, though in many cases it is complicated by the concomitant sensory disturbances.

Analysis of Paroxysmal Tachycardia

Any focus in the heart may, if it is more excitable than the normal nomotropic site (the sinus), initiate a contraction. Such a beat is usually called an extrasystole. A regular, and successive series of such beats constitutes the rhythm known as paroxysmal tachycardia. The heterogenetic origin of such beats may be due to several causes. The writer shows that stimulation of the accelerators, in animals, causes tachycardia, and that such rhythm is usually productive of heterotopic beats having their origin at the junctional tissues between the auricles and the ventricles. Clinically, such cases have been reported. The question whether single heterotopic beats can be similarly elicited by nervous stimulation is discussed. It is obvious that such abnormal beats must disturb the normal nomotropic

stimuli. The writer, however, distinguishes another group of "heterotypical" beats, which can arise and do not cause any effect upon the normal rhythm. The origin of these beats is suggested. Thus, when there is defective conduction in a portion of the A—V conduction system, then stimuli from the auricle cannot reach the particular part of tissue which normally receives this stimulus for contraction. Such tissue may generate its own stimulus and cause a contraction independently of the sinus rhythm. Such beats, may be induced also by accelerator stimulation, being more evident when the heart is beating strongly in response. The writer thinks that the nodal type of paroxysmal tachycardia is due to abnormal stimulation of the accelerators; that probably, also, the auricular type is similarly produced. It is in both cases possible that such abnormal beats may be heterotopic or heterotypic, or both. Evidence in favor of the nervous origin of tachycardia is, clinically, supported by the fact that vagal stimulation may check the rhythm. Experimentally, tachycardia cannot be produced by accelerator stimulation if the vagus is simultaneously treated. This character of the tachycardia experimentally produced is similar to that seen clinically. It is sudden in its onset, and offset. It is not induced immediately on nervous stimulation, but appears some time afterwards. The frequent failure of the ventricle to respond to excessive high auricular frequencies is mentioned.

The Cortical Portion of the Suprarenal Capsule; its Physiological and Pathological Relationship to the Brain and Reproductive Glands

The medullary part of the suprarenal capsule has received much attention from various experimentalists on numerous occasions but the author finds that the cortical part has also an important role in the human economy. Atrophy of this part is nearly always present in anencephaly, hypertrophy on the contrary is met with in numerous cases in hypertrophic sclerosis of the brain. Tumors of the cortical part of the capsule give rise to a syndrome characterized by (1) premature development of hair on the pubes and in the axilla and the formation of long hairs on the cheeks and chin in young girls and increased development of hairs on the chest, back, and limbs; (2) general adiposity; (3) troubles of the genital functions, premature appearance of menstruation and sexual desire and after puberty

cessation of the menses and disappearance of sexual desire, after the menopause, metrorrhagia. When this syndrome exists the author considers it is possible to suspect a suprarenal tumor, formed histologically of the cortical elements, but its position is still uncertain as tumors in any part of the abdomen, in the true pelvis, in the ovary, testicle, kidney will also give rise to the same syndrome.

The Dangers of Pertussis and its Relation to Tuberculosis

Saint-Philippe believes that whooping cough often lays the foundation for tuberculosis, chronic bronchitis, and emphysema. Abortive cases of pertussis or those without a whoop constitute one-sixth of all cases of the disease. The diagnosis should be made from the obstinate spasmodic cough with vomiting, the profuse expectoration, the discharge from the eyes and nose, and the congested face. Examination of the sputum reveals the bacillus of Bordet and Gangou, the causative microorganism, and the blood shows leucocytosis. Early diagnosis and proper treatment may enable one to prevent the serious complications, broncho-pneumonia, and prolonged bronchitis. The disease is seldom directly fatal, but frequently children die from the sequelæ. The co-existence of measles and pertussis renders the latter much more than ordinarily fatal.—*Journal de Médicine de Paris.*

A Cutaneous Reaction in Syphilis

Hideyo Noguchi (*Journ. of Exper. Med.*) has used for his experiments on this subject a preparation which he terms "luetin." It is made by emulsifying pure cultures of *Treponema pallidum,* killing them by heating at 60 deg. C. for sixty minutes, and adding 0.5 per cent. of carbolic acid. Experimenting on rabbits, he found that the repeated inoculation of either living or killed syphilitic spirochætes into the testicles leads to a condition in which the intradermic injection of luetin is followed by a well-marked inflammatory reaction. This reaction is not obtained in normal rabbits, nor is it forthcoming either in rabbits suffering from active syphilitic orchitis, or in rabbits in which this condition has been cured by the administration of salvarsan four months previously. He has also studied the action of luetin upon man in a series of

400 cases, comprising 177 syphilitics, 77 parasyphilitics, and 146 controls. The controls consisted of 46 normal individuals and 100 persons suffering from various diseases of non-syphilitic nature; in none of these was a positive luetin reaction obtained. But in syphilitic and parasyphilitic patients, particularly in tertiary and hereditary affections, the inflammatory cutaneous reaction was well marked. In manifest tertiary affections he obtained it in every case; in latent tertiary affections, in 84 per cent. of his cases; and in 96 per cent. of the hereditary cases. During the primary and secondary stages the reaction is infrequent, and when present, is of mild degree. Exceptionally, however, he has found severe reactions in cases where energetic treatment has been or is being carried out, and where clinical signs of syphilis are absent. In certain cases of old infection in which no treatment has been taken, and in which no symptoms have appeared for many years, and in the course of which miscarriages have not occurred, the cutaneous reaction has failed to appear. But, despite the absence of symptoms, mothers who have young syphilitic children have usually given the reaction. Comparing his cutaneous reaction with the Wassermann reaction, the author thinks it probable that the latter is more constant in the primary and secondary cases, and the former in the tertiary and latent forms. It appears that the Wassermann reaction is more directly and immediately affected by antisyphilitic treatment than is the cutaneous reaction. He is now engaged upon further experiments with luetin.—*B, M. J.*

OBSTETRICS AND GYNAECOLOGY

IN CHARGE OF ADAM H. WRIGHT, K. C. M'ILWRAITH, FRED. FENTON, AND HELEN MACMURCHY.

Remote Results of Radium Therapy on Adnexitis and Periadnexitis

Henri Cheron (*Rev. mens. de gyn. d'obst. et. de pœd.*), says that in many cases the medical and surgical treatments of suppurative lesions of the adnexa are unsatisfactory on account of their slowness and the confinement to bed that are necessary. In the use of radium for these conditions we have a method of treatment that is rapid, lasting from one to six weeks, and that is definitely curative. It renders the prognosis much better. The radium treatment is the best medical treatment for these lesions and is equally effective with surgical measures. It enables us to save one ovary functionally perfect when both are involved.—*Amer. Jour. of Obst.*

Treatment of Uterine Fibromata with Radium

H. Cheron (*Jour. de méd. de Paris*), finds that radium has somewhat the same action in uterine fibroids as the X-rays. Radium causes a lessening of hæmorrhages, both between and at the menstrual periods, and some retrogression in size of the growths, due to a lessening of congestion in the uterus. The treatment must last for some time. Menstruation will become much less although the menopause is not at once established. If the treatment is continued the menopause will be established and without any unfavorable symptoms. The effect on the ovaries is not the same as that of the X-rays, since the development of the Graafian follicles is not interfered with, and a number of the author's cases became pregnant later. Neither does it seem to affect the production of the internal secretion of the ovaries. The action of the rays should be limited to small pelvi-abdominal fibroids, and especially those that by their distance from the abdominal wall are inaccessible to the X-rays; containdications to the use of radium are malignant degeneration of the tumor, anæmia resulting from severe hæmorrhages, severe compression of the abdominal organs, and es-

pecially torsion of the ureters, increase in size of the tumor in spite of the applications, and undesirability of provoking the menopause. The application is made by introducing into the cervix up to the isthmus a tube of radium, protected by layers of gauze, so that it will give out beta and gamma rays. The tube should be left in place for six to eight hours at a time, and sittings should be repeated every three days for twelve sittings, if a decided menopause effect is to be obtained. A radium dermatitis may be produced in the vagina and cervix, but it is not serious and may be avoided by proper care; it is evidenced by a copious discharge from the uterus. The general effects of the treatment on the system are excellent. pressure is relieved by lessened congestion, and the patient feels well.

Rupture of the Uterus with Expulsion of the Foetus into the Abdominal Cavity

By Henry Russell Andrews, M.D., B.S., M.R.C.P.

Cases of rupture of the uterus in which the fœtus has been wholly expelled into the abdominal cavity are among the most unfavorable for treatment that can be met with. The patient only too often succumbs as the result of shock, hæmorrhage, or peritonitis, in spite of operative treatment.

As I have been fortunate enough to have two such cases that recovered, operation being performed within a short time of the occurrence of the rupture, I think it worth while to record them.

Case 1.—M. A. S., 35, was admitted into the London Hospital with a diagnosis of rupture of the uterus after application of forceps with the head above the brim. The patient was in a state of collapse, blanched, and restless; pulse 124, respirations 44. The abdomen was opened two hours after the occurrence of the rupture. There was much free blood in the peritoneal cavity. The fœtus, which weighed 7½ lbs., was lying loose in the abdominal cavity. There was a vertical tear on the left side, from the vagina to within one inch of the origin of the left round ligament. In the upper two inches the tear was not complete, only affecting the superficial part of the uterine wall. There was a large hæmatoma in the anterior part of the left broad ligament from which oozing was going on, but no active arterial hæmorrhage was seen.

Subtotal hysterectomy was performed. The anterior and

posterior lips of the cervix were sewn together with catgut, a large rubber drainage tube was left in, lying in the vaginal rent, and the peritoneum was sewn over all the raw surface, except at the point where the tube came through the pelvic floor. Intravenous injection of saline solution was carried out throughout the time of the operation. The patient made a very good recovery.

Case 2.—E. H., aged 33, was admitted to the London Hospital on January 31, 1912. Labor began at 7 p.m. on January 30th, and the doctor was called in for the first time at 1 p.m. on the 31st. He found the head high up with the occiput behind. Application of forceps for three hours on and off failed to bring the head into the pelvis, the forceps slipping several times.

The patient was blanched; pulse 150 to the minute, and very feeble. The fœtus could be felt lying free in the abdominal cavity. The patient was so much exhausted on admission that it was thought best to let her lie quietly in warm blankets for an hour. At the end of this time she was anæsthetized and the abdomen was opened.

There was a large quantity of blood in the abdominal cavity. The fœtus and the placenta, which were lying loose, were extracted and the uterus was pulled up for inspection. A large tear was found on the left side extending from the vagina into the body of the uterus. There was a hæmatoma in the left broad ligament.

Suture of the rent, communicating as it did with a lacerated vagina and a large hæmatoma, did not appeal to one as a promising method of treatment, so it was decided to remove the whole uterus. Panhysterectomy was therefore carried out as quickly as possible. Two pints of saline solution were injected into a vein of the left arm during the operation, several pints of saline solution were left in the abdominal cavity, and an intravenous injection of ergotin was given when the patient left the table. The pulse-rate at the end of the operation was between 140 and 150. The vagina was lightly packed with gauze, which was removed twenty-four hours later.

The patient made a smooth, uninterrupted recovery, and left the hospital on February 19th—that is, twenty days after the operation. The fœtus and the placenta weighed 13¾ lbs.

In recent years there have been several discussions as to the best method of treatment to be adopted in cases of complete rupture of the uterus. In the cases here recorded there can be

no doubt that the only method of treatment was by abdominal section. as the fœtus lay free in the abdominal cavity. Whether it is better to suture the uterus or to remove it can only be decided in each individual case on its merits. If there is much bruising and hæmatoma it is probably better to remove the uterus rather than to leave it damaged, possibly infected, in connection with a torn vagina and a hæmatoma of the broad ligament. Removal of the uterus in such cases is an easy operation, but a good deal of time is required for suturing the raw surface of vaginal wall or cervix, as the raw edge is a long one, complete dilatation being present, and the patient's blood pressure so low that the fact that no oozing is taking place cannot be taken to mean that no bleeding will occur when she has recovered from her collapse.—*Abstract Brit. Med. Jour.*

Toxaemia Caused by Latent Necrosis of a Uterine Fibromyoma

J. Kaarsberg (*Hospitalstidende,* Copenhagen, Aug. 23, p. 942). The fibromyoma which has become necrotic and is the cause of a vaginal discharge is well known, but latent necrosis and suppuration of a fibromyoma are rarely recognized. Of late a certain number of such cases have been reported. In some cases the fibromyoma is infected without the occurrence of necrosis, and organisms apparently have entered through the blood stream and not through the endometrium. With this exception, there is necrosis of the fibromyoma, with or without suppuration. Acute or chronic toxæmia may result. In the acute cases which are the commonest, there is a slight rise of temperature, sometimes accompanied by pain. On examination no extra-genital cause for this rise of temperature is found, but on operating necrosis of the tumor, with or without suppuration, is discovered. Sometimes this necrosis is evident only on microscopic examination. In the chronic cases there is little or no rise of temperature, but the signs of progressive toxæmia. The pulse is rapid and general debility is progressive till even the slightest exertion becomes tiring.

A 5-para, aged 44, was admitted into hospital. She was last confined 8 years ago, and had suffered for a considerable time from pain in the hips and lower limbs, most severe during menstruation. A month previously a fibromyoma of the uterus reaching up to the umbilicus had been discovered, and further growth had even during this short period been observed. Four

days before admission menstruation set in with severe abdominal pain, and the temperature rose to 103·3°.

She was drowsy, the tongue was moist, the pulse was 108, and the temperature was 102.2°. The lungs were normal, but everywhere over the heart there was a systolic murmur, loudest at the apex. A firm tumor was felt extending up to a point 2 fingerbreadths above the umbilicus. The cervix was directly continuous with this tumor. Laparotomy was performed and as infection of the tumor was suspected, it was removed intact. The stump of the uterus was sutured and covered with peritoneum. The tumor, of the size of the fœtal head, was at the back of the uterus and was separated by a layer of tissue 1 cm. thick from the endometrium. It was fluctuating and contained some serous fluid. Under the microscope it was found to consist mainly of fibrous tissue in which slight necrosis and purulent infiltration had set in. After a prolonged convalescence the patient completely recovered.

A woman, aged 45, had suffered from phlebitis after her last confinement 12 years ago. During the past year menstruation had been irregular, lasting 2 to 14 days with intervals of 1 to 3 weeks. She had suffered from attacks of dyspnœa, a sense of pressure over the heart, and pain radiating outwards to the left arm during the past fortnight. More recently she also had hypogastric pain. The lower limbs where œdematous, the face was cyanosed, the temperature was 101.9°, and the pulse was 112 and regular. There was some cardiac dilatation, and a loud systolic murmur was heard all over the heart, but loudest over its base. The pulmonary second sound was accentuated. A firm, painless tumor was felt, extending upwards to a point half-way between the symphysis and the umbilicus. The cervix was directly continuous with this tumor, which was lobulated. The abdomen was large and fat, but there was no ascites. On account of cardiac weakness, and the temperature, which remained about 101°, an operation was deferred. The origin of the fever was at first obscure, for there was considerable cough, and there were also tenderness and œdema of the left leg, possibly due to phlebitis. But after a fortnight's observation the tumor was found to have reached the level of the umbilicus. This rapid growth suggested necrosis. Supra-vaginal amputation of the uterus was therefore performed, and the left uterine appendages, which were involved, were removed.

Editorials.

TUBERCULOSIS HOSPITAL FOR CHILDREN

It was a beautiful and interesting function at the pretty little town of Weston, when on the 27th of May, His Royal Highness, the Duke of Connaught, laid the foundation stone of the first hospital in the world to be erected for children suffering from pulmonary tuberculosis. It is, of course, well known that all the members of the Royal family of Great Britain take a deep interest in all matters pertaining to the health of the masses.

Our Governor-General has the very happy faculty of being able to say much in a few words about such things. For instance, in his address before the first Congress of the Canadian Public Health Association in Montreal, December 13th, he thus referred to the subject of vaccination.

"Under the head of Preventive Medicine comes vaccination and other forms of inoculation. I know that vaccination has many antagonists, and I have no wish to enter into any argument on the subject. I will confine myself to the simple statement of the fact that in the cemetery of Gloucester, England, lie the bodies of 276 unvaccinated children who died during the smallpox epidemic of 16 years ago. Only one vaccinated child lost its life in the same epidemic."

We are told that the new building will be a complete hospital, not a mere wing of some other hospital building. It will have its own organization, its own staff, its own ideals and its own methods. The

Toronto Globe makes no mistake in saying: "The saving of curable children is one of the most effective kinds of conservation that can be practiced by civilized people."

PROFESSOR RAMSAY WRIGHT

It came as a surprise to most of us a few months ago to learn that Professor Ramsay Wright had resigned his chair in the University of Toronto. He has said good-bye to Canada, and sailed for England June 8th. He was born in Alloa, Scotland, September, 1852. He was educated at Alloa Academy, Edinburgh High School and University. He graduated M.A. 1871, B.Sc. 1873, and became LL.D., Tor. 1902. He was appointed Professor of Natural History, Toronto University, in 1874, Professor of Biology, 1887. He became Vice-President of the University and Dean of the Arts Faculty in 1901.

Professor Wright is a scholar, a teacher and a cultured gentleman. For 38 years he worked for the University of Toronto, quietly but diligently and effectively. During all these years he taught both by precept and example. His influence for good was incalculable, the seed which he has sown has borne and is now bearing fruit in all parts of the world. So far as one knowing a good deal about the matter can judge every student of his respects him, admires him, and a large proportion of them actually love him. He is not yet 60. He is younger mentally and physically than the average man of his age. Why did he not stay longer with us?

His many friends who had the opportunity said

good-bye to him with deep regret and profound sorrow. We should, however, throw aside all selfish considerations and look on the bright side. He has worked and done well for us, and we shall ever remember these things.

THE FEEBLE-MINDED AT LAST

The turn of the feeble-minded has come at last. They have waited long for recognition, but they have been recognized—and their rights to some place of their own, some chance for work—some education—are at last the subject of legislation by the Imperial House of Commons. It is none too soon—the feeble-minded have increased and multiplied—and the crimes and miseries have increased and multiplied still more. One Bill is long overdue, founded as it is on a report received and printed four years ago. The Home Office, where the Bill was prepared, have put it in the forefront of their programme for the session, and besides there are two other Bills on the care of the feeble-minded, by private members, one of which received its second reading without any opposition. These facts all give ground for the hope that this splendid measure will pass this session, and the Right Hon. the Home Secretary has stated that he hopes the Government Bill will be given its second reading before the autumn holidays.

A LICENSE IN BRIT SH COLUMBIA

The Detroit Medical Journal tells us that the Canadian Province of British Columbia has a more rigid examination for a license to practice medicine

than any other State or Province on this Continent. The examination for the license is so searching and thorough that the number of successful candidates is small.

The examination lasts for about two weeks, and papers are set for the subjects in the average medical curriculum except biology and physics. Clinical and oral examinations are conducted in medicine and surgery, and there is also an examination in practical bacteriology.

At one recent examination there were 42 candidates, of whom 19 failed; at another there were 62 candidates, of whom 23 failed. Some of the unsuccessful candidates had qualifications from England and Edinburgh. In many cases they were considered good men, but they did not sufficiently appreciate the position of affairs. Many of them supposed that the examination was a mere formality and regarded it as such. Men are now beginning to realize the fact that a certain amount of preparation, even on the part of graduates, is required by this examination.

A PREVENTABLE DEATH

Many Canadians were deeply grieved to hear of the untimely death of Mr. Wilbur Wright. *The New York Medical Journal* speaks of it as an avoidable catastrophe. The *Journal* considers it a death which is both a national calamity and a national disgrace. He was cut off in the flower of manhood and the prime of his genius by a disease which is due to dirt in drinking water. He was a victim of the negligences of some governmental authority in the pro-

tection of the people's supply of water. "He died of typhoid fever, the prevalence of which is one of the blots on our happy-go-lucky methods of looking after the health of our citizens, and the more or less reverend shifting of the responsibility to the Almighty in His wisdom which will doubtless adorn countless testimonials of esteem and regard, but does not absolve us from our guilt."

We in Canada have had some very serious lessons during the last few years, notably at Ottawa and Sarnia. We are exceedingly pleased to know that the Governments of our different Provinces in Canada fully realize the vast importance of preventive medicine.

From the new Health Act we expect a great improvement in health matters in the Province of Ontario. The division of the province into districts and the appointment of able physicians to supervise these districts will probably bring to us a great improvement in the near future.

THE OLD GENERAL HOSPITAL

We are glad to learn that a strong effort is being made to retain the old General Hospital of Toronto for hospital purposes. It is generally recognized that a hospital is urgently needed in that part of the city. The Board of Trustees have put their price on it—four hundred thousand dollars. The greater part of it has been thoroughly renovated in recent years. As a consequence the buildings were never in better condition than they are at present.

The Business Men's Association of the east end

is urging the City Council to take immediate steps to get possession of the property. Some have proposed to make it a municipal hospital. The physicians in that neighborhood do not favor this suggestion. Dr. John Noble feared that Aldermen might use the hospital as a "vote getter" by sending their friends there. He would prefer to make a Board of Governors responsible for the work of financing the institution. Other physicians expressed similar views.

We are told that Mr. J. W. Flavelle, the President of the present Board of Trustees, has expressed the opinion that the hospital should be retained, and, in connection, the city should issue debentures to cover the cost and appoint a Board of Governors to manage the institution.

EDITORIAL ITEMS

H. R. H. the Duke of Connaught, on the 30th of May, 1890, visited the Toronto General Hospital. He was received by the late Mr. Walter S. Lee, Chairman of the Board of Trustees, Mr. D. A. O'Sullivan, LL.D., Mr. Jno. L. Blaikie, Mr. Geo. Gooderham, Mayor E. F. Clarke and Dr. Charles O'Reilly. The House Surgeons on duty at the time were Dr. L. F. Barker, Professor of Medicine, Johns Hopkins University; Dr. Thos. Cullen, Professor of Gynæcology and Abdominal Surgery, Johns Hopkins University; Dr. Chas. F. McGillivray, Whitby, President of the Ontario Medical Association; Dr. Roland Hill, Chicago; Dr. R. M. Hillary, Aurora, and the late Dr. Owen McCarthy, Niagara Falls. Miss M. A. Sniveley was Superintendent of the Hospital Training School for Nurses.

H. R. H. was conducted through the hospital by Dr. O'Reilly and the Trustees. After the inspection he inscribed his signature "Arthur" and added, "I have been very much pleased and interested with my visit."

RECENT GRADUATES IN MEDICINE

Medical Faculty, University of Toronto.

Medals—McClenahan, R. R. McPhedran, F.M., Gold; Breslin, L. J., second silver; Wellman, A. L., third silver.

Graduates—Bell, Harold; Breslin, Louis Judah, B.A.; Brown, Hubert Arthur Wood, B.A.; Butt, William Henry; Dick, David Lavern; Hall, Hector Clayton, B.A.; Hassard, Frank Russell, B.A.; Hayes, Miss Ethel Millicent, B.A.; Hutchinson, Fred., B.A.; Heffering, Harold; Kelly, Thomas Francis; Leary, Edgar John, B.A.; Lee, John Gagen, B.A.; McClenahan, Robert Roy, B.A.; McCullough, James Stuart, B.A.; MacDermott, William Bernard; MacDonald, Marshall; McPhedran, Frederick Maurice, B.A.; Macpherson, Charlton Archibald; Middleton, John Joseph; Oakley, Miss Geraldine, B.A.; O'Leary, George Arthur; Robertson, Herve John, B.A.; Sproule, Herman Frederick; Struthers, Ernest Black, B.A.; Warren, Don Alexander, B.A.; Ware, Frank Bertram; Wellman, Arnold Lorne; White, John Hill, B.A.

Medical Faculty, McGill University, Montreal.

Holmes' Gold Medal for Highest Aggregate in all subjects forming the Medical Curriculum—F. H. McKay, Mount Stewart, P. E. I.

Final Prize for Highest Aggregate in the Fifth Year Subjects—A. P. Davies, Hull, Que.

Wood Gold Medal for Best Examination in all the Clinical Branches—D. S. Lewis, M.Sc., Montreal, Que.

McGill Medical Society, Senior Prize—First, A. J. Hebert, Shawinigan Falls, Que.; second, E. C. Levine, Montreal, Que.

Honors in Aggregate of all Subjects—F. H. McKay, A. P. Davies, D. S. Lewis, M.Sc., W. R. Stone.

Medicine, Honors—F. H. McKay, A. P. Davies, D. S. Lewis, M.Sc., L. G. Houle, J. S. McLeod, H. C. Steeves, B.A., L. P. MacHaffie, W. R. Stone, Paul A. B. Ewert.

Surgery, Honors—F. H. MacKay, J. W. McNutt, R. W. Digby.

Obstetrics, Honors—W. R. Stone, F. H. MacKay, L. W. MacNutt, M. W. Thomas, F. S. Swaine, A. B. Walter, J. S. Jenkins, R. W. Digby, D. S. Lewis, M.Sc.

Gynæcology, Honors—Mackay, F. H.; Davies, A. P.; Houle, L. G.; Derby, L. L.; Lewis, D. S., M.Sc.; MacHaffie, L. P.

Planche, H. H.; Stone, W. R,; Hebert, A. J.; McCreary, C. H.; MacNutt, L. W.; Sutherland, T. W.; Rosenbaum, J. J.

Oto-Laryngology, Honors—McKim, L. H.; Lewis, D.S., M.Sc.; MacHaffie, L. P.; Mulloy, P. G.; Draper, F. E.; Stone, W. R.; Ewert, Paul, A.B.; MacDonald, D. L., B.A.; MacLeod, J. S.; Freeze, D. F. D.; MacKay, F. H.; Culton, J. R., B.A.; Walter, A. B.

Ophthalmology, Honors—Lewis, D. S., M.Sc.; Thomas, M. W.; Hebert, A. J.; Freeze, D. F. D.; Digby, R. W.; MacNutt, L. W.; Sutherland, T. W.; Walcott, E. J. O'N.; Brown, Samuel; Oulton, J. R., B.A.; Webster, A. V.

Pathology, Honors—MacKay, F. H.; Davies, A. P.; Houle, L. G.; Walcott, E. J. O'N.; MacNutt, L. W.; Webster, A. V.; Macleod, J. S.; Walter, A. B.; Lewis, D. S., M.Sc.; MacDonald, D. L., B.A.; McKim, L. H.; Hebert, A. L.; MacHaffie, L. P.; Oulton, J. R., B.A.; Planche, H. H.; Steeves, H. C., B.A.; Swaine, F. S., B.A.; McCreary, C. H.; McNulty, L. T.; Beck, S. G., B.Sc.; Digby, R. W.; Draper, F. E.; Ewert, Paul A. B.; Freeze, D. F. D.; Jenkins, J. S.; Stewart, J. W.

Pass List—Beck, S. G., B.Sc.; Bourne, C. R.; Brown, C. R.; Brown, Samuel; Crawford, J. W.; Davies, A. P.; Derby, L. L.; Derome, H. R.; Digby, R. W.; Douglas, H. T.; Draper, F. E.; Ewert, Paul, A.B.; Freeze, D. F. D.; Furlong, H. G.; Gregory, F. L.; Harrison, J., B.A.; Hebert, A. J. B.; Houle, L. G.; Jenkins, J. S.; Kean, J. S.; Kean, S. G., M.D.; Kolber, Joseph; Lewis, D. S., M.Sc.; MacDonald, D. L., B.A.; MacHaffie, L. P.; MacKay, F. H.; Macleod, J. S.; MacNutt, L. W.; McCreary, C. H.; McKim, L. H.; McMillan, W. H.; Miller, R. S., M.D.; Mulloy, P. G.; Oultin, J. R., B.A.; Planche, H. H.; Ramsey, G. Stuart; Robert, H. R.; Rosenbaum, J. J.; Steeves, H. C., B.A.; Stewart, J. W.; Stone, W. R.; Sutherland, T. W.; Swaine, F. S., B.A.; Thomas, M. W.; Walcott, E. J. O'N.; Wallace, Irwin; Walter, A. B.; Webster, A. V.

In addition to the above, Messrs. T. A. Briggs, A. N. Foster, A. B. Hawkins and L. T. McNulty have passed in all subjects of the final year with the exception of medicine and clinical medicine. They will be granted a supplemental examination in this subject in September.

Mr. Harry Dover, third year student, is the winner of the Sutherland gold medal for Clinical Chemistry.

The Woodruff gold medal will not be awarded this year, owing to an insufficient number of students entering for it.

MEDICAL FACULTY, WESTERN UNIVERSITY, LONDON.

Thirty-eight out of a class of forty-five students were success-

ful in the graduating examinations of the Western Medical College, of London. This is the largest class in the history of the institution. James Moriarity, of Orillia, who won the gold medal, has had a brilliant career, and was a scholarship man every year. The valedictory will be delivered by him at convocation.

Gold medalist—James Moriarity, Orillia.

Silver medalist—A. MacOulay, London.

Honors—Fourth year, R. D. Morand, R. J. McRoberts, C. L. Douglas, L. Glenn; third year, T. Bowman, A. Muterer, L. Elliott, Turner, Wright, Aitken; second year, Cornish, McPherson, Luney, Bean, Aiken, Gilfoyle, Hudson, Poisson, Siddell, Campbell, Wilson, Anderson, Jones; first year, Pearson, Fisher, J. M. Young.

Scholarships—Third year, Thornley Bowman, London; second year, C. Cornish, Crampton; first year, Gerald Pearson, London.

Graduates—Adams, W. N.; Birks, W. H.; Bodkin, A. W.; Barrett, H.; Bice, E.; Clegg, G. G.; Coulter, S.; Campbell, J. A.; Collins, E.; Downham, W. S.; Douglas, C. L.; Fletcher, D. A.; Garret, D.; Green, J. P.; Glenn, L.; Morand, R. D.; Moriarity, J.; McRoberts, R. J.; McIlwraith, W. L.; McCrae, J.; McAulay, A.; McCechan, C. E.; McFadyen, H. A.; Nelson, G. T.; Park, R.; Phoenix, N. L.; Schram, N. T.; Scollick, P. A.; Shipley, M.; Shute, R. J.; Simpson, E. K.; Talbot, A. E.; Thompson, G. E.; Tran, C. B.; Watson, H. N.; Wagner, G. C.; Washburn, R. J.; Lealland, L. R.

Medical Faculty, Dalhousie University, Halifax.

Faculty Medal, Graduating Class—Guy Stewart Goodwin, Halifax. Distinction in Surgery, Medicine, Clinical Surgery, Clinical Medicine and Obstetrics.

Birt Prize, Medicine and Clinical Medicine—Guy Stewart Goodwin.

MacAulay Prize, Practical Anatomy, first year—Arthur Hines, Noel, Hants Co.

Graduates—Beaton, John; Creighton, Thos. MacCully; Devine, Alfred Joseph; Goodwin, Guy Stewart; Grant, Harry Gouge; Hartigan, David James; Kenney, Wm. Francis; MacAulay, John Philip; Saunders, Reginald MacKeen; Thibault, Soffroi Henry.

Medical Faculty, Laval University, Montreal.

Graduates—Accocela, Gabriel Arcangelo; Adam, Philippe; Aubin, Joseph Arthur; Beaulac, Joseph Henri; Beaupré Dolard; Bourget Emélias; Daniel Paul; Deschenes, Joseph Georges Ajutor; Desjardins, Arthur Barthélemy; Dupuis, Pierre; Emery,

Fernand; Gagnon, Jean Lucien; Geoffroy, Albert; Hurtubise, Elzéar; Janelle, T. A. ; Joyal, Joseph Alph. Hector; Lajoie, Jos. Henri Roméo; Lamarche, Charles Edouard; Lapierre, A. Aquilas; Levesque, Ronald; Mathieu, Charles T.; Panneton, Joseph Auguste; Paquin, Joseph F. Dorcina; Paré, Joseph Amédée Armand; Perreault, Nestor; Perras, Joseph Henri Fernand; Pineault, Adhémar; Phénix Georges Albert Frémont; Plouffe Adrien Francis; Ritchotte, Jos. Edouard Delphis; Telmosse, Ignace; Tétreault, Joseph Arthur; Turgeon, Joseph Alfred Roméo; Lundie, John Alexander, M.D.

The Hingston Gold Medallist—Joseph Auguste Panneton, of Three Rivers, Que.

COLLEGE OF PHYSICIANS AND SURGEONS OF ONTARIO

The following have passed the recent examination of the Council and are now entitled to practice in Ontario:

Charles Cleland Alexander, Seaforth; John Gordon Alexander, Dunville; Joseph Camil Eugene Arseneau, Robitaille (Que.); Edwin Charles Axford, Talbotville.

Harold Richmond Barker, Thornbury; Newton James Barton, Beeton; William Russell Bateman, Thomasburg; Frank Aubrey Benner, Bayham; Harry Wordsworth Benson, Ross Mount; Cecil Clinton Birchard, Coboconk; William Oscar Bonser, Toronto; John Courtland Bradley, Fenaghvale; Louis Judah Breslin, Toronto; Hubert Arthur Wood Brown, Toronto; Frederick Thomas Bryans, Jamestown; Frederick Sypher Burke, Fergus; William Henry Butt, London.

William Charles Campbell, Belleville; William Richard Cann, Oshawa; George Wylie Dundas Carleton, Thornhill; William Ernest Caven, Erindale; Neil Alexander Christie, Stayner; Llewellyn Herbert Coates, Brantford; Morley Garnet Cody, Newmarket; William Macpherson Cody, Hamilton; Robert Colvill, Port Perry; Stella Alice Cunningham, Toronto.

Robert Davies Defries, Toronto; Leonard Lansdowne Derby, Plantagenet; Reginald Winniett Digby, Brantford; Roy Gladstone Douglas, Meaford; Thomas Alexander Jamieson Duff, Cookstown.

Allan Sloan Eagles, Meaford; Donald Thomas Evans, Port Perry; Edgar George Evans, Virginia.

David Joseph Norman Ferrier, Belwood; Carlos LeRoy Russell Fuller, Ruthven.

John Alexander Gardiner, Walton; Howard Hilman Gordon, Manotick; Charles Robert Graham, Arnprior; William Osborne Gliddon, Ottawa.

John Edwin Hagemier, Hespeler; Louis Gordon Hagemier, Hespeler; Hector Clayton Hall, Fort Qu'Appelle, Sask.; William Vernon Harcourt, Arthur; Alfred Purvis Hart, Wilfrid; Horace Hanly Harvie, Coldwater; Ethel Millicent Hayes, Toronto; Clarence Wellesley Henders, Port Perry; Clarence Almanzer Howard, Athens; Fred Hutchinson, Sarnia.

Lloyd Arnold Jones, Glanford.

William Andrew Kennedy, Kingston; Malcolm Daniel Boyd Kinsella, North Bay.

William James Leach, North Gower; Edgar John Leary, Britannia; Joseph Horace Legault, Ottawa.

Malcolm Thomas MacEachern, Fenelon Falls; Lloyd Phillyss MacHaffie, Cornwall; Ewen Archibald Mackenzie, Toronto; Alfred Charles Martin, Hamilton; Elmer Walker Mitchell, Sandhill.

Charles Joseph McCabe, Hamilton; John Sangster McCallum, Smith's Falls; James Stuart McCullough, Walter's Falls; James Phipps McDermott, Eganville; Ernest Augustus McDonald, Milwaukee (Wis.); Marshall McDonald, Cowley (Alberta); Edwin Henry McGavin, Seaforth; Frank E. Beachem McGilvery, Simcoe; Donald George Sinclair McKay, Bradford; Robert Roy McClenahan, Waterdown; Archibald Harry McMurchy, North Bay; Frederick Maurice McPhedran, Toronto; George Alexander McQuibban, Harriston; James William McQuibban, Harriston.

Geraldine Oakley, Craigvale; George Arthur O'Leary, Toronto; Leo Harold O'Meara, Fallowfield.

Garfield Arthur Platt, Kingston; Stuart MacDowall Polson, Kingston; Albert Gower Poole, Trenton; George Arthur Publow, Kingston.

James Frederick Rigg, Niagara Falls; Isabella May Roberts, Toronto; Herve John Robertson, Kelvin; Austin Roszell, Smithville; Charles Scott Russell, Kingston; Harold Lee Rowntree, Weston.

Nathan Shacknove, Hamilton; Charles Wilfrid Sinclair, Aylmer; Wilfred Davy Smith, Currie's Crossing; Herman Frederick Sproule, Toronto; Rubert Stanley Stevens, Delta; Eliza-

beth Lilian Stewart, Aurora; Robert Roy Stirrett, Petrolea; Ernest Black Struthers, Galt; Paul Joseph Sweeney, Arthur.

Frank Leslie Thompson, Uxbridge; Howard Elsworth Thompson, Whitby; William Robert Tutt, Parry Sound.

Merritt Carlton Vaughan, Forks Road; Ambert Hastie Veitch, Port Elgin.

James George White, Mount Clemens (Mich.); Warren Edward Wilkins, Verona; John Bowers Widdis, Hagersville; Cleveland Roy Wilson, Toronto; John Parr Wilson, Palgrave.

Ernest William Zumsteen, Winslow.

Medical Faculty, University of Manitoba.

List of Graduates in Medicine, 1912—Banting, Charles Orby; Bedford, George Victor; Breidenbach, Lambert; Bunn, Charles R. R.; Campbell, William Ewert; Davidson, Andrew McConnell; Jamieson, Fred Lawrence; McConnell, Lorne Hansel; McEachern, John Daniel; McKinnon, Frank Lorne; Murison, James Alois; Shaw, Edward Albert; Stephanson, Stephen; Story, Herbert E. Angelo; Straith, Peter Luther; Strong, Condren Maurice; Tompsett, David Alexander; Warner, Norman Wilfrid.

Prizes and Medals Won, 1912.

Dean's Prize, consisting of microscope, awarded to the two students of the graduating class having the best record on the aggregate of the five annual examinations of the course in medicine—McConnell, Lorne H.; Bunn, Charles R. R.

Silver Medal—McConnell, Lorne Hansel.

Bronze Medal—McEachern, John Daniel.

Hutchinson Gold Medal for Highest Aggregate on the entire Course—McConnell, Lorne Hansel.

O'Donnell Gold Medal in Obstetrics—McConnell, L. H.

ITEM.

ONTARIO HEALTH OFFICERS.

District health officers have been appointed in six of the seven districts into which the province is divided for purposes specified in the Act. The appointment of an officer for the eastern division of New Ontario has been deferred pending further consideration. The appointments in the various districts are as follows:

District No. 1, comprising the Counties of Essex, Elgin, Kent, Lambton, Middlesex, and Oxford, with headquarters at London—Dr. David Benjamin Bentley, of Sarnia.

District No. 2, comprising the Counties of Bruce, Dufferin, Grey, Huron, Perth, Wellington, and Waterloo, with headquarters at Palmerston—Dr. Thomas James McNally, of Owen Sound.

District No. 3, comprising the Counties of Brant, Haldimand, Halton, Lincoln, Norfolk, Peel, Welland, Wentworth, and York, with headquarters at Hamilton—Dr. Daniel Alexander McClenahan, of Waterdown.

District No. 4, comprising the Counties of Ontario, Durham, Northumberland, Prince Edward, Hastings, Peterborough, Victoria, Muskoka, and Simcoe, with headquarters at Peterborough—Dr. George Clinton, of Belleville.

District No. 5, comprising the Counties of Lennox and Addington, Frontenac, Leeds, Grenville, Stormont, Dundas, Glengarry, Prescott, Russell, Carleton, Lanark, and Renfrew, with headquarters at Kingston—Dr. Paul J. Maloney, of Cornwall.

District No. 6, comprising the Districts of Parry Sound, Nipissing, Temiskaming, and Sudbury, with headquarters at North Bay—Dr. W. E. George, Haileybury.

District No. 7, comprising the Districts of Manitoulin, Algoma, Kenora, Thunder Bay, and Rainy River, with headquarters at Fort William—Dr. Robert E. Woodehouse, Fort William.

The above-mentioned officers will report for the prescribed course of instruction August 1st next. An examination will be held at the close of the term of instruction, and upon the results of this examination will depend the tenure of appointment.

Future appointees may be required to take the regular D. P. H. course of the various universities.

Personals.

The new wing of St. Michael's Hospital cost $250,000.

Dr. D. W. Macpherson, Toronto, sailed for Europe May 12th.

Dr. J. Orlando Orr arrived at Liverpool May 30th.

Dr. J. Algernon Temple, of Toronto, sailed for England June 1st.

Dr. Allen Baines left Toronto June 18th and sailed on June 20th for England.

Dr. J. G. R. Stone, formerly of Steelton, Ont., has removed to Greenwood, B.C.

Dr. A. H. Garratt, Toronto, spent the month of June in Dr. Ryerson's Cottage at Sturgeon Lake.

Dr. Nelson Tait, Toronto, has recovered from a recent attack of septicæmia; a portion of the left forefinger was removed.

Dr. T. Shaw Webster, Toronto, sailed for England June 20th, He expects to go as far as Switzerland before returning home.

Dr. W. C Barber has opened his Sanatorium for the treatment of nervous and general diseases, "Simcoe Hall," Barrie, Ont.

Dr. H. A. Williams, Allenford, Ont., has disposed of his practice and is leaving in September for post-graduate work in Europe.

Dr. Colin Campbell, of Toronto, sailed for England June 1st, and expects to return to his office August 3rd. When last heard from he was motoring in France.

President Falconer of the University of Toronto sailed for England June 14th. He will attend a congress of representatives of universities in various parts of the Empire in London during the month of July.

Dr. Chas. Ferdinand Durand, late Proctologist of the German Hospital, Buffalo, has opened an office at 590 Huron Street, Toronto. His practice will be limited to diseases of the rectum.

Dr. R. A. Stevenson, of Toronto, sailed for England June 22nd.

The Canadian Veterans Association of Chicago, composed mainly of veterans of the Fenian Raid of 1866, held their annual banquet June 3rd. Among those present were Dr. Jno. C. McGill, Chairman, who served in the Haldimand Rifles in 1866 and Dr. Denis Morin of the First Quebec Cavalry.

The following officers were elected in the Aesculapian Club of Toronto: President, A. A. Macdonald; Vice-President, J. M. Cotton; Secretary, Dr. G. Elliott; Treasurer, E. E. King; Executive Committee, Drs. W. McKeown, Bruce Smith, Gibb Wishart and Bruce Riordan.

Sometime last year the Montreal Association for the Blind was organized. They started out to collect the sum of $100,000 to erect and equip an up-to-date school for the English-speaking blind. Lord Strathcona promised to donate $10,000 when $90,000 had been subscribed. The President received a cheque for $10,000 from Lord Strathcona, May 31st, and now has on hand the full amount asked for, namely, $100,000.

At the eighty-first annual commencement of Wesleyan University, at Middletown, Conn., held on June 19th, the degree of Doctor of Laws was conferred upon Dr. Amos J. Givens, Proprietor of Givens Sanitarium for Nervous Diseases at Stamford, Conn.

Book Reviews.

A Short Practice of Medicine. By Robert A. Fleming, M.A., M.D., F.R.C.P.E., F.R.S.E., Lecturer on Practice of Medicine, School of the Royal Colleges, Edinburgh; Assistant Physician, Royal Infirmary, Edinburgh. Second Edition. The MacMillan Company of Canada, Limited. Toronto, 1912.

From the student's standpoint there is considerable need for such a book as the one before us. Too often the essentials of the disease are not grasped, buried as they often are in a mass of interesting but none the less wearisome statistics and historical details. The average undergraduate requires a text-book to which he can turn after a day's clinics and fix firmly in his mind the outstanding points of a disease.

This practice of medicine from a member of the Edinburgh school claims no originality. It is an effort to provide the student "with a text-book giving the general outline of each individual disease," and it admirably fills this purpose. In this, the second edition, new paragraphs have been added on Kala-azar, Gastric Neuroses, Adenoids, Suffocative Catarrh of Adults, the Varieties of Myelitis, Diseases of the Cauda Equina, Psychasthenia and Myositis. We note with pleasure that it is published by a Canadian house, and trust it may be but the forerunner of other medical books of the same high standard.

Report from the Pathological Department and the Department of Clinical Psychiatry. Central Indiana Hospital for the Insane. 1909-1910 and 1910-1911. Vol. IV. Indianapolis: Wm. B. Burford, Contractor for State Printing and Binding. 1912.

The clinical material which is yearly being wasted in the asylums on this continent must be enormous. It is refreshing to see that as evidenced by this report, efforts are being made and encouragement given to those who are attacking the problems of insanity. There is a vast field for the correlation of the pathological and clinical findings in psychiatry. We think such a report as this should be carefully studied by all dealing with such problems.

Social Work in Hospitals. The Samaritan Fund. Being a Paper read before the Incorporated Association of Hospital Officers, March 15th, 1912. By SYDNEY PHILLIPS, B.A., of the Inner Temple, Barrister-at-law; Steward of St. Thomas' Hospital, London. London: Longmans, Green & Co., 39 Paternoster Row. New York: Bombay and Calcutta. All rights reserved. Price, Sixpence net.

What we call "Social Service" in connection with hospital work is looked after in England by so-called "Samaritan Funds." It is gradually becoming recognized that organized help is needed for patients who are not ill enough to remain in hospital and not well enough to work. In this most instructive paper, the history of this movement is traced by a well-known hospital worker, and the need for such a department strongly emphasized. We recommend its study to all interested in the restoring of health to the unfortunates among us.

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Obituary

JOHN MARKS STEWART, M.D.

Dr. J. M. Stewart died at his late residence, Chesley, May 25. He was born in Kingston and graduated M.D. from Queen's University in 1882. He at once settled in Chesley, where he was engaged in active practice for thirty years.

We are told that no general practitioner in Canada was more dearly beloved or more highly respected by his patients and friends than Dr. John Stewart. He was called the "Weelum McClure" of Bruce County. He took a deep interest in public matters, was a member of the Town Council from 1887 to 1897 and Reeve from 1897 till 1902. He was for a time an active politician and was the Liberal candidate for Centre Bruce in 1892, when he was defeated by the narrow margin of five votes.

DANIEL CLARK, M.D.

Dr. Daniel Clark died at his late residence, 375 Huron Street, Toronto, June 3rd, aged 82. He was born in Scotland, but came to Canada when nine years old. He received his medical education in the Toronto School of Medicine, and graduated M.D., from Victoria University in 1858. He did considerable post-graduate work in Edinburgh, London and Paris, devoting himself especially to nervous diseases. In 1875 he was appointed Superintendent for the Hospital for Insane, Toronto, in succession to Dr. Workman, and retained this position until the time of his resignation seven years ago. Although he was not very well known to the present generation of doctors, he was for many years recognized as one of the ablest physicians in Canada.

His last illness was a long one, extending over five years, the cause of his death being Bright's disease.

Selections.

Therapeutic Eck's Fistula

Eck's fistula has been known since 1877 as an experimental resource for studying the physiology of the liver. The intervention was long a severe one, largely because of the collateral injuries inflicted on important neighboring organs. Recently improvements in technique have greatly reduced the operative mortality. Among these is the immunization of the animals against the autodigestion of tissues which results from injury to the pancreas. It is said that the operation was once performed on the human subject, under what circumstances we are not informed. The death of the patient, which occurred on the following day, may or may not have been attributable wholly to the intervention. Under any sort of physiological equilibrium an Eck's fistula in man is hardly conceivable. The operation consists merely in anastomosing the vena cava and portal vein after which the latter is ligated. It is otherwise, however, if the portal circulation is already hopelessly obstructed; for in such a case an attempt to convey the nutrient portal blood directly into the general circulation should lead to a prolongation of life, provided the liver has not been wholly isolated. That the operation has never come into use in cirrhosis of the liver must be set down straightway to the introduction of the Talma-Drummond operation in 1898, which gave the cirrhotic liver an increased supply of blood through omentopexy.

At a very recent session of the Berlin Medical Society (*Berliner klinische Wochenschrift,* March 25, 1912) Rosenstein spoke on the ideas of Franke expressed to the German Surgical Congress, of 1911, on the possibility of treating cirrhosis of the liver with the establishment of an Eck's fistula. The technique has been perfected on the cadaver and on dogs, but thus far Franke has found no case suitable for the operation. In discussing this point Bier stated that during the past year he had begun the operation twice but was unable to complete it—once because of severe hæmorrhage and again because of extensive thickening of the peritoneum. He knew of no successful case thus far at the hands of any other operator. Therefore the patient whom he presented to the Society was the first to be operated on with complete success. This was a woman aged 60 with cirrhosis and ascites. The two veins had been anasto-

mosed and the intervention had been well tolerated. About four months had since elapsed, and thus far evidences of improvement are still somewhat in abeyance. Bier had started out with the full intention of doing a Talma operation and changed it on the spur of the moment. The intervention appears to have been difficult and tedious, marred with interruptions, but the patient's life seems not to have been menaced. The operation has now been shown to be practicable and it will be for the future to say if it is worth while. The patient will doubtless be shown before medical societies, so that the question of improvement will be settled at first hand. Meanwhile it may be doubted whether pending the verdict, the intervention will be repeated.—*N. Y. Medical Record.*

Surgical Treatment of Gastric Ulcer

H. Lindner (*Muench. med. Woch.*) discusses the surgical aspects of gastric ulcer in such detail as he considers may be of interest to the general practitioner. After defining gastric ulcer as a defect in the gastric mucosa, which has both tenacity and a tendency to progress, he sets up the general scheme, that simple ulcers can and should be healed up by the physician, the surgeon only stepping in when the physician fails, and complicated ulcers, which in many cases resist all internal therapy, should be subjected to surgical treatment. The old ideas about the cause of ulcers of the stomach are no longer tenable. Among many other views, it used to be held that hyperacidity was the chief cause, but this cannot be true, since ulcers are at times observed where there is even subacidity. The work of Payr has done something to further our knowledge about the ætiology of gastric ulcer. These experiments show that a very extensive disturbance of the blood supply, and marked necrosis are required before hydrochloric acid will produce ulceration. Mahnert thinks there is some causal connection between appendicitis and gastric ulcer. The author tends toward the belief that the presence of an antibody enables even subnormal quantities of acid to erode the mucous membrane. In dealing with what he terms the simple cases, he enters into some discussion as to those cases in which internal therapy fails. For example, as a rule, the two symptoms which require attention are pain and hæmorrhage. Pain rarely, if ever, calls for surgical interference. In the case of hæmorrhage it is rare that large, isolated bleedings need an operation. In most cases

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The "Clinical Record," for Physicians' bedside use, will be sent on request to any physician who has not yet received a copy together with samples of GRAPE-NUTS, POSTUM and POST TOASTIES for personal and clinical examination.

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the physician can stop the bleeding. Repeated small hæmorrhages, on the other hand, often prove intractable to internal treatment. The surgeon is then called upon to assist. Before going into more exact details, he turns his attention to the two classes of operative treatment in these cases—the direct and indirect. The former include excision of the ulcer, gastrostomy, and arrest of the bleeding by cauterization or other means, ligature of the vessels leading to the ulcer; the latter is practically always gastro-enterostomy. The direct method is less frequently resorted to than the indirect, partly because it is less certain, and is a much more severe one for the patient. In cases where the operation has to be carried out rapidly and with as little shock as possible, the indirect method is certainly better. Another reason why gastro-enterostomy is usually preferred is that surgeons from time to time have opened the stomach and failed to find a bleeding vessel, which *post mortem* proves to be either very small or in such a situation that it is difficult to find. He then deals with complicated cases, which belong to the surgeon. After tracing the course of a perforating ulcer, he points out that the only chance for the patient after perforation has taken place is a surgical operation. Caution must, however, he exercised, since cases occur in which all the symptoms which point to perforation are present, and at the operation it is found that no perforation exists. He quotes three cases of his own. In one, the condition simulating perforation was phosphorus poisoning with a gallstone in the gall bladder; in a second, death was due to meningitis and enteritis; and in the third, only a slight redness of the peritoneal covering of the duodenum and a slight exudation was found. This case recovered. If perforation occurs, the case must be operated on within the first twelve hours. The symptoms which must guide the surgeon to open the abdomen are collapse, intense pain, rigidity of the abdominal walls, small, quick pulse, and the appearance of dying. He does not think that reliance can be placed on the disappearance of the liver dullness. Again, he points out that the pain of a perforating ulcer may be localized in the right side of the abdomen, and thus give rise to the diagnosis of appendicitis. He also gives instances of other variations in which the gastric contents escaped, either into another hollow viscus or was limited by adhesions, and formed the source of an abscess. He deals in some detail with some of these cases. Returning to hæmorrhage, he enters into a longish discussion as to whether resection should be carried out or merely gastro-enterostomy. The diffi-

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culties attending gastro-enterostomy are two-fold. In the first place, as long as the pylorus remains open, the gastro-enterostomy opening tends to close, and when this occurs, the operation had not helped the patient one bit. The second disadvantage is that peptic ulcers of the small intestine not infrequently follow the operation, although he shows that when he carried out Hacker's operation this did not take place, while it was frequent after Wölfler's. In favor of resection, it is said that callous ulcers have a marked tendency to become malignant. Whatever may be the true etiology of cancer, Lindner does not agree that this is correct. On the other hand, he admits that it is often impossible to diagnose a malignant ulcer from a simple one at the operation. He further admits that if malignancy is suspected, resection must be attempted. He adds illustrations of difficult differential diagnoses, and also discusses the treatment of hour-glass contracture of the stomach. In conclusion, he believes that gastro-enterostomy yields good results, from 60 to 70 per cent. of cures and from 12 to 15 per cent. of improvements taking place, as that 70 to 80 per cent. of the cases do well with this form of treatment.—*B. M. J.*

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Miscellaneous

The Neglected Therapy of Convalescence

The physician of education and experience, who keeps in touch with the progress of medicine generally, is well informed as to the treatment of most of the "thousand and one" ills that he is called upon to combat. The diagnosis and treatment of acute conditions, as well as the successful management of the more chronic affections, are subjects which he is constantly investigating and studying. It so happens, however, that after the dangerous shoals of medical navigation have been successfully negotiated, and when the crisis or danger point has been passed, the physician is all too liable to relax his vigilance and to allow the patient to convalesce without sufficient attention to the therapeutic details of this important period. While the feeding of the convalescent is of great importance, the medico-tonic treatment is equally essential, in order to improve the appetite, tone the digestive, assimilative and eliminative functions generally, and to hasten the time when the patient shall be once more "upon his feet." Among all of the general reconstituent and supportive measures in the therapy of convalescence none is more essential than the reconstruction of a blood stream of vital integrity and sufficiency. Pepto-Mangan (Gude) is distinctly valuable in this special field, as it furnishes to the more or less devitalized blood the necessary materials (iron and manganese) in such form as to assure their prompt absorption and appropriation. One especial advantage of administering these hæmatinics in this form is that digestive disturbance is avoided and constipation is not induced.

Antithyroidin in Basedow's Disease

Dr. Blanchod was called to a very severe case of Basedow's disease, in which there was marked excitation, insomnia, attacks of coughing, palpitation of the heart, and pronounced emaciation and weakness. The pulse was 160, the goiter had interfered with breathing and had increased very rapidly, and the exophthalmos was very evident. The disease progressed despite absolute rest and change of air, so that treatment with antithyroidin was begun. Seventeen days later the patient wrote that the tumor had diminished much in size and the dyspnœa was less troublesome. There was still a slight tremor when the patient attempted to write. After 24 days the patient was again examined. The

"while it is said that 'religion follows the flag' it is also a fact that therapeutic results invariably follow the application of certain accepted remedies.

The primal thought following diagnosis is treatment, and in the selection of a remedy consideration is given to those possessing reliability of therapeutic action and should it be a case presenting inflammatory or congestive involvements, whether deep or superficial, antiphlogistine would, from extensive clinical evidence, seem indicated.

In the treatment of bee stings, insect bites, dermatitis from exposure to the sun rays, sprains etc., so prevalent at this season, antiphlogistine applied thick and hot will afford unmeasurable relief.

The convenience of application of this dressing is a factor. It is supplied in aseptic containers carefully sealed and the contents are fully protected."

pulse was now 70, and most of the excitability had disappeared. As soon as the drug was discontinued the patient again became worse, and small doses brought only partial relief. After 14 days of no medication the circumference of the neck had again increased and the pulse rate was 150. There was pronounced dyspnœa, lassitude, and irritability. A second treatment with antithyroidin was then begun, and the results were as remarkable as after the first. After ten days the pulse was only 75, and after 20 days the patient could again take up his vocation as teacher. A third cure was subsequently necessary, but the improvement now seems to be permanent. The size of the neck is normal, the exophthalmos is very slight, and the pulse rate only 80. There is constant gain in weight, and the mental and physical conditions are excellent. There can be no doubt that a third cure with antithyroidin here accomplished a complete cure.—La Province Medicale.

Prepare the Babies for Hot Weather

During the month of June it is not a bad plan for the physician to take mental "stock" of the babies under his care, especially such as are bottle-fed, with the general idea of recommending such treatment as will tone up and vitalize those whose nutrition may be below par, so that they may enter the trying summer months in the best possible condition to ward off or withstand the depressing influences of extreme heat or the prostrating effects of the diarrhœal disorders of the heated term.

Careful attention to feeding is, of course, a *sine qua non* and the details of the infant's nourishment should be carefully investigated and regulated. But this is not all. Many bottle-fed babies are below standard from a hæmatologic standpoint. The marasmic anæmic baby deserves special attention in the way of building up and restoring a circulating fluid which is deficient in red cells and hæmoglobin. In the entire Materia Medica there can be found no direct hematic quite as suitable for infants and young children as Pepto-Mangan (Gude). In addition to its distinctly pleasant taste, this hemic tonic is entirely devoid of irritant properties and never disturbs the digestion of the most feeble infant. Being free from astringent action, it does not induce constipation. A few weeks' treatment with appropriate doses of Pepto-Mangan very frequently establishes sufficient resisting power to enable the baby to pass through the hot summer without serious trouble, gastro-intestinal or otherwise.

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Pituitrin in Difficult Parturition

Much attention is being given by the medical press of Germany and other European countries to the importance of Pituitrin as an oxytocic. The drug has been somewhat extensively used for the past two or three years, both here and abroad, chiefly, perhaps, as a hæmostatic and heart stimulant. Now it is known to be of great value in uterine inertia, obstetricians in many of the German hospitals and elsewhere who have thoroughly tested it clinically, pronouncing it a truly remarkable oxytocic.

For the benefit of practitioners who may not be familiar with its origin and nature, it may be explained that Pituitrin is an extract of the posterior or infundibular portion of the pituitary gland. Although the physiology of this gland is as yet largely

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speculative, there seems to be no doubt that it contains a substance or substances that exert a considerable influence over the metabolism and on the cardio-vascular system.

As bearing upon the value of Pituitrin in parturition, this expression from Dr. Emil Vogt, of the Royal Gynæcological Clinic at Dresden, is significant:

"The oxytocic action of Pituitrin at this clinic was observed in over one hundred cases. After the rupture of the fœtal membranes, in the second stage of labor, the physiologic effect of Pituitrin is the most pronounced; the contractions of the uterus follow each other much more rapidly and energetically, and the intervals between pains are decreased. Individually the pains are not more severe, so far as suffering is concerned, even in the case of sensitive women, than they would be in a normal delivery. In half of the cases the Pituitrin was administered in the second stage of labor. It failed only once; in all other instances its action was very pronounced. And although we encounter a great many cases of narrow pelvis in Dresden, from 40 to 50 per cent., it was not necessary to have recourse to forceps delivery in a single instance in which Pituitrin was employed . . . . According to our experience, Pituitrin is the ideal oxytocic."

Pituitrin is manufactured by Parke, Davis & Co. It is supplied in one-ounce bottles and in glaseptic ampoules (for convenient hypodermic injection), each ampoule containing one cubic centimeter, or 16 minims, the usual dose.

Parke, Davis & Co. have just issued a pamphlet on Pituitrin as an oxytocic, in which is reprinted not only the extract from Dr. Vogt which appears in this article, but also a number of others from prominent German specialists and practitioners in which Pituitrin is highly extolled as a corrective of uterine inertia. Physicians will do well to write the company, addressing them at the home office in Detroit, for a copy of the pamphlet.

Notes on the Use of Fibrolysin

A patient seen by Dr. R. V. Fellenberg gave the following history: She was pregnant in the fourth month, and had passed through a very severe appendicitis. She had intense pains, probably due to adhesions near the uterus. The appendicitis dates back two years, at which time some pus was evacuated, though the appendix could not be removed. The appetite was good; there was marked constipation, but not much vomiting. On the day the patient was seen the first time there was a moderate bleeding, which soon ceased. On examination an enlarged organ could

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readily be palpated, and which was firmly fixed to the surrounding tissues so as to be completely immovable. Two months later the uterus was slightly more movable, but the pains had become so intense that the patient actually demanded termination of the pregnancy. Before an operation was decided upon she consented to be treated with fibrolysin injections. After the injection of one dose (2.3 CC.) of fibrolysin, the pains disappeared almost completely, so that the patient could be brought to term with relatively little suffering. The confinement was without incident or complication. This case shows better than any other the powers of the drug to soften adhesions. Massage was contraindicated here owing to pregnancy, but the necessary stretching was better performed by the growing uterus than could be accomplished by any other means. The patient probably would have carried the child to term without the fibrolysin, but would have had much pain and distress during the last months. It would have been a mistake here to induce abortion in the early months, as the pregnancy actually cured the patient of her adhesions. If the case had not taken so favorable a course it would have been necessary to operate and to divide the adhesions rather than empty the uterus.

The case observed by W. Stoeltzner demonstrates the value of fibrolysin in chronic pleurisy and pneumonia. A child seven years old had passed through a typical pneumonia, but the dullness and bronchial breathing, with some fever, persisted. There was a decided retraction of the corresponding half of the thorax and a beginning scoliosis. In the course of three weeks the contents of ten ampoules of fibrolysin were injected subcutaneously between the scapulæ. During these three weeks the temperature became normal, and the child increased in weight, and when seen a month later there were no more evidences of the pneumonia and the scoliosis had disappeared. The contents of one vial is given daily, or every second or third day; children should not receive less than half a vial at one time. In urgent cases the solution may be injected into the veins.—Deutsch. med., Woch., 1912, No. 6.

K. Tietze recommends fibrolysin injections for the extremely painful infiltrations so common after intramuscular injections of salvarsan. In the case seen by him, the infiltrations were so painful that the patient was comfortable only by lying upon the stomach. They had persisted for a long time without softening. Five injections were made directly into the infiltration, which soon became softer and finally presented the appearance of a cold abscess. After incision a large amount of pus was evacuated, after which a rapid cure set in.—Dermatolog. Centralblatt, Vol. 15, No. 5.

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Original Communications

HYPERTHYROIDISM: ITS TREATMENT

By W. J. Macdonald, M.D., St. Catharines.

Overactivity of the thyroid gland produces a definite group of associated symptoms variously designated as hyperthyroidism, exophthalmic goitre, Parry's, Graves' or Basedow's disease. By the latter three names the disease is know from the fact that Parry in 1825, Graves in 1835 and finally Basedow in 1840 independently gave to the world a vivid, and withal a very accurate description of the clinical picture produced by this condition.

For the day in which they lived, and with the facilities at their disposal for obtaining knowledge, a remarkably good attempt was made by all three of these remarkable men to describe the pathology of this condition. During the last few years, however, a great ray of light has been thrown around this hitherto impregnable disease, and as a consequence many valuable lives throughout the world are being daily restored to health, which a few years ago must inevitably have been sacrificed.

The knowledge thus obtained has been the direct result of systematic microscopical examination of the thyroid in all stages of the disease immediately on its removal. These systematic examinations have to-day developed a pathology so sane and sound as to put on a definite basis almost every case of hyperthyroidism presenting itself for treatment. To Kocker, of Berne, who unquestionably leads the world to-day in goitre surgery, may be given in great measure the credit for the sound basis on which its pathology rests. And yet, even with all the recently developed fund of information at our disposal, we

must not lose sight of the fact that there yet remains much unbroken ground, that the cause for many existing conditions is as yet unknown, that a great field for experimental and developmental work remains untrodden, and that in the future, when additional light shines where now there is darkness, the day may arrive when all cases of this dread disease may not only be relieved, but permanently cured.

The diagnosis of hyperthyroidism at a time when treatment will offer the greatest prospects for relief, is frequently no easy matter. Of the four cardinal symptoms, tachycardia, exophthalmos, the goitre, and tremor, any two or even three may be absent. The symptoms are always complex, they are frequently variable. Without the slightest warning they may appear simultaneously, or one after another they may appear in any order during a course of weeks or even many months. In all cases, no matter the mode of their onset, there has invariably been some pre-existing change in the thyroid gland.

Tachycardia.—The most important of the cardinal symptoms just enumerated is the rapidity of the heart's action. Not only is it the most important, but it is the most constant symptom as well. In many instances, the first indication of approaching Graves' disease is the sudden acceleration of the heart beat following some trivial exertion or excitement. Especially in the cases of young women, cardiac activity should be viewed with some concern, and the case watched closely for the development of further untoward symptoms. As a rule this cardiac rapidity or heart throbbing is the first symptom observed by the patient, and the first intimation to them that all is not well. In the early stages, though the rate may be fast it is regular, with the tension of excellent quality. In the later stages of the disease a marked contrast appears. The pulse once so regular though fast, now becomes very irregular in rhythm, and of very low tension. In typical hyperthyroidism the pulse beat rarely drops below 100, usually varies from 120 to 140 and frequently runs as high as 180 to 200 beats to the minute. Though occasionally dropping to nearly normal the pulse rate is withal very consistent, and varies only with the increase or decrease of thyroid secretion. A fright, a sudden excitement, anxiety or worry will favor hypersecretion and consequent increase in the pulse rate; rest and quiet will favor decrease in the thyroid secretion and consequent lowering of the pulse rate. The overactivity of the gland may be variously estimated by the constancy of the heart action.

The increase in the work of the heart muscle is very great, and consequently produces in time considerable dilatation and

consequent hypertrophy. When this condition is present, the throbbing of the carotids is usually well marked. Care must be taken to differentiate this condition from myocardial disease. The blood pressure varies with the stage of the disease. At first it is high, gradually becoming lower on the advancement of the disease. A constant fast pulse rate from no apparent cause, even in the absence of all other associated symptoms, should produce in the mind of the attending physician at least an honest suspicion of the overactivity of thyroid cell secretion. This suspicion will be immediately emphasized if it is discovered that even the slightest excitement or worry is prone to greatly accelerate the pulse rate. It is quite possible for hyperthyroidism to exist even in the absence of exophthalmos, of tremor, or of the enlarged gland.

Exophthalmos.—In order of importance, exophthalmos easily stands second in the chain of symptoms making up the composite picture. In probably one-half of all cases it is readily distinguishable, and is probably the most striking of all the symptoms. In many instances, however, the eye symptoms may be entirely wanting. When present it may be so in varying degrees, from what would be ordinarily considered only a slight widening of the palpebral fissure, to the extreme case where dislodgement of the eye ball appears imminent. In these latter cases the protrusion is sometimes so great as to prevent the closing of the eyelids. As the tachycardia varies, so may the exophthalmos, and according to some observers, from the same cause, the rise and fall of the thyroid secretion. The direct cause of exophthalmos is believed by some to be due to an increase of orbital fat, by others to spasm of the orbital muscle of Müller, and by others again to a weakness in the orbicularis. There can be no doubt, however, that whatever may be the direct cause, the fundamental reason must be attributed to the toxic effects of hypersecretion in the thyroid.

In connection with the condition known as exophthalmos, Stellwag's sign (staring without winking) is a most important feature. Dalrymple has described the peculiar appearance occasioned by an apparent widening of the palpebral fissure, while Von Graefe first called attention to the fact that in looking downward there is usually a perceptible lagging of the upper eyelid. To Moebius is due the credit of first demonstrating the fact that at a near point of vision, there is in severe cases a marked insufficiency of accommodation. Of these various signs, known by the names of the men who first described them, Stellwag's is

probably the most important. It is frequently one of the earliest signs to appear.

The Goitre.—As applied to this condition, the name exophthalmic goitre is rather a misnomer, inasmuch as in at least a certain percentage of cases no goitre is discernible at any stage of the disease. This is, of course, the exception, but the fact remains that it does occasionally exist.

In nearly all cases there is at least some enlargement of the thyroid which may vary in degree from that which is scarcely distinguishable to one of very considerable size. Should the gland be so little enlarged as to cause difficulty in its determination, it may be the more readily palpated if examined during the act of swallowing a mouthful of water.

The gland itself, it is now conceded by all authorities, is in every case altered. Some even go so far as to claim the ability to describe the symptoms displayed in a given case by a mere microscopical examination of the removed gland. By them it is claimed that the pathological changes in the gland are constant in all cases of overactivity, the degree of alteration in the glandular substance depending definitely on the amount of oversecretion.

Three distinct types of goitre are readily recognizable:

(1) The small, hard, nodular gland, the usual type in cases of hyperthyroidism.

(2) The soft pulsating gland.

(3) The simple goitre upon which may develop symptoms of hyperthyroidism.

In the latter type of enlargement, the pathological condition is somewhat different to the former two. In the latter, instead of a uniform change in gland substance we find the changes occurring only in scattered areas, and consisting mainly in the loss of colloid, and vesicles filled with cuboidal and columnar cells.

As may be the case in the former two cardinal symptoms, tachycardia and exophthalmos, so may we find in the enlargement and contraction of the goitre, an increase or decrease of the general symptoms. This is not always true, for in many instances the most acute general symptoms are present in an almost imperceptible enlargement of the gland.

Tremor.—The fourth of the cardinal symptoms is that of tremor, and is considered of almost equal importance with any of the three just described. In extreme cases it may be almost likened to the jerky movements manifested in chorea. In all cases there is great muscular weakness. Tremor in the ordinary

case is usually confined to the limbs, and in frequency runs from seven to nine to the second. In a typical case the movements may be distinctly observed by having the patient hold the hands out at arms length with the fingers widely spread.

Apart from the four foregoing symptoms, there are many minor manifestations intimately interwoven in most typical cases of hyperthyroidism. Many of these symptoms, though minor, have a definite bearing on the indications for treatment.

In most chronic cases in which the disease suddenly becomes active, and in practically all acute conditions, emaciation and great loss of strength are features of note. This condition, probably the result of a great increase in metabolism, forewarns a grave prognosis in all cases where the emaciation is extreme.

Persistent vomiting from no apparent cause must be always considered a grave symptom. Diarrhœa is a common accompaniment in advanced cases, its only untoward effect however being its liability to lead to great prostration.

In long standing cases of hyperthyroidism, cardiac insufficiency will sooner or later supervene. This is in turn followed by attacks of dyspnœa, more or less severe according to the extent of the heart involvement. The toxic effect of the constant over-secretion of the gland will very frequently produce an annoying itchiness in the skin. It may in some cases become so severe as to be accompanied by an eruption.

The etiologic factors in hyperthyroidism are little known. Heredity appears to play an important part. What may be the direct stimulus producing this extra secretion is unknown, and whether it works from within or without the gland is also unknown. In hyperthyroidism the iodine elaborated by the gland is much less in quantity that that of the normal thyroid. In parenchymatous goitre, the entire gland contains much more iodine than the normal one, though bulk for bulk it is much less. The generally accepted theory for the primary cause of hyperthyroidism is that some one essential component of the secretion is lacking, and in an endeavor to effect its restoration, some other component part of the secretion is over-produced to the extent of producing toxic manifestations. The chemistry of these secretions is unknown; the primary and real cause of hyperthyroidism is therefore unknown. The symptom-complex in all well marked cases of hyperthyroidism is unmistakable, and in these cases the diagnosis is correspondingly easy; but in those mild cases where no one symptom outstands prominently, the difficulty experienced in arriving at a diagnosis may be very great indeed. If tachy-

cardia is persistent, and any one of the other cardinal symptoms present even in a mild degree, the diagnosis may be fairly positive; if one or more of the cardinal symptoms accompanying tachycardia are at all prominent, the diagnosis is positive. Persistent tachycardia in the presence of progressive emaciation and evident nervous disturbances, should at once excite an honest suspicion, and an enlargement of the thyroid carefully searched for. It will usually be found, but in some cases it will not.

In these obscure cases thyroid extract may be used to advantage for diagnostic purposes. Small doses should be given, when on any manifestation of increase in the symptoms the diagnosis will at once become positive.

The chronic form of hyperthyroidism is by far the most common, though acute cases are continually in evidence. The more acute they are, and the more marked the cardinal symptoms, the graver must always be the prognosis. Although much more hopeful than the acute cases, yet it must ever be kept in mind that even the mildest case may at any moment suddenly assume a much more serious nature—assume a sudden exacerbation which may rapidly prove fatal. No case, no matter how mild, is free from this risk.

The prognosis will depend entirely on the length of time and severity of the symptoms. The more marked and severe these appear, the higher must be the immediate mortality. The contra is obviously also true. In young adults this disease in its acute form is fairly common. It runs a rapid course. Death or recovery will frequently ensue in from a few days to a few weeks. In the acute form death is due to the toxic effects of the oversecretion; in the chronic form to cardiac weakness and exhaustion.

Hyperthyroidism or excessive secretion of the thyroid gland, is sometimes followed by the extreme opposite condition, the loss of function or diminution of the secretion, a condition known as *hypothyroidism*. In the child or young adult who has not reached complete development, the consequences of defective secretion are much more serious than in those who have attained both their physical and mental development. The former is followed by gradual loss of intelligence, while in the latter instance the condition is less marked and may be better characterized as a mild myxœdema. Hyperthyroidism is frequently undiagnosed, and in the youth especially, this characteristic condition is attributed to a natural mental dullness, or to dullness from some unknown cause. The clinical manifestations due to the diminution or ab-

sence of thyroid secretion are in many ways just as remarkable as those produced by over-secretion.

Treatment.—In the treatment of hyperthyroidism, the first principle must be to secure a subsidence of the over-secretion of the gland. The best means of accomplishing this purpose has long been a much disputed question, mainly from the fact that all so-called remedies appeared to produce but very slight benefits of any kind whatever. Various drugs have been mentioned and employed with varying success by various physicians, but as yet no specific remedy has been found. Theoretically, serum therapy should produce the desired results, but as yet nothing along this line has been discovered which has produced the slightest benefit.

In view of the fact that but a small percentage of cases of this nature are cured by medicinal means, and the improvement in the condition experienced by the same therapy is not sufficiently great to warrant much hope for the future, it would appear that surgical interference in selected cases must be the treatment of the future. Cases treated medically make at the best but unsatisfactory progress, while *selected* cases treated by the surgical procedures of to-day are *cured.*

In the surgical treatment of hyperthyroidism two distinct methods are practised, according to the severity and stage of the disease—ligation of the superior thyroid vessels, and extirpation of the gland. These two procedures are rapidly becoming recognized by the medical profession as the most scientific and safe methods of treatment, and the results being obtained to-day fully justify these conclusions.

Ligation of the Thyroid Vessels.—To Wolfler is given the credit of being the first to advise and practise the ligation of the superior thyroid vessels in an attempt to control the secretion of the gland produced to an abnormal extent by hyperactivity of the thyroid cells.

The abundant experience obtained in the world's largest clinics, and those where the greatest amount of work for goitre is being done, is to the effect that ligation of the vessels is in certain cases the operation of choice.

(1) In the case of a patient in the earliest stages of the disease, one whose symptoms are mild, who may lack even the goitre or the prominent eye symptoms, vessel ligation will frequently effect a permanent cure. At this stage of the disease, too, the operation is attended by the slightest amount of risk.

(2) In long standing cases where the patient is very ill, where secondary changes have occurred in the heart, in the liver,

in the spleen or in the kidneys, where the superior thyroid arteries present that thrill peculiar to the late stages of the disease, ligation of the superior thyroid vessels will sometimes show beneficial results for a considerable length of time. These are the cases in which a thyroidectomy is out of the question, where the removal of the gland would be fatal, but where by choosing a safe time in which to ligate, the life may be prolonged for months or even years.

(3) And finally there is that larger group of cases, those in whom a thyroidectomy is indicated, and yet who, on account of commencing changes in other organs, are in no condition to stand operation at the time. In these cases we have mild dilatation of the heart, we have as a result of chronic toxins, diseased kidneys with probably a high percentage of albumin, we have in some cases œdema and oncoming ascites, and in many instances a chronic diarrhœa. These are the cases where a preliminary ligation of the vessels, should a judicious moment be chosen for its performance, prove of priceless value to the patient. It checks for the time being the cause of the entire trouble—the hypersecretion and aided by such judicious treatment as rest and X-ray applications, will frequently restore the patient to the point of safety where the necessary thyroidectomy can be safely accomplished. In this class of cases the preliminary ligation is of inestimable value, because as a result of it the patient is subsequently able to stand the more severe operation and thus be completely restored to health.

Anæsthesia.—The anæsthetic of choice in all goitre work is ether, administered by the open method. This always holds good where the surgeon is operating in his own theatre with his own assistants, and where as a result everything is certain to run smoothly. Surroundings may modify the conditions in many ways, but where a competent anæsthetist can be procured to administer ether in the manner mentioned, the results will be found to be more uniformly good. Should a case be so far advanced as to make the use of any general anæsthetic unsafe, a satisfactory operation may be done under local anæsthesia. For this purpose a weak solution of cocaine, from 1-10 to 1-5 of one per cent. being the most satisfactory strength. This strength of solution may be used in large quantities and really acts very well indeed. In all cases where a general anæsthetic is administered, it should be preceded at least half an hour by a hypodermic injection of morphia, gr. 1-4, and atropine sulphate, gr. 1-100.

Operation.—The operation of ligating the superior thyroid vessels is not usually a difficult matter, though occasionally the

artery may be found very deeply placed, when, especially if the operation is being conducted under cocaine anæsthesia, considerable difficulty may be experienced.

A transverse or collar incision across the centre of the thyroid cartilage will provide the most convenient space for approaching the vessels, and will also leave the least disfiguring scar. It should extend at least an inch and a quarter to an inch and a half on either side of the mid-line of the neck. A separate incision may be made over each artery should the surgeon so prefer, but in doing so the vessels will only be reached after much greater difficulty, and the scar remaining will be none less than if it were made in the preceding manner, so that the original incision is the one of choice.

This incision is carried through skin and platysma myoides muscles, and on being retracted exposes to view the sternomastoid, which in turn is drawn to one side by a retractor. This exposes the omohyoid muscle, which on being retracted toward the mid-line and slightly upward exposes the superior thyroid artery and vein. In effecting the ligation I have always used an aneurysm needle and a silk ligature doubled. By passing the needle fairly deep all danger of wounding either of the vessels will be avoided. The ligature is passed around both the artery and the vein, and they are tied *en masse* close to the pole of the gland. The omohyoid and sternomastoid muscles are now allowed to regain their normal position, and the skin incision brought together. The platysma muscles are carefully sutured, as by so doing a scar is avoided to a very great extent. It is a fact that no matter how carefully the skin may be sutured, if the platysma is not brought accurately together a bad scar will result, whereas if the platysma is carefully sutured, the resultant scar will be scarcely visible. The wound is thus closed without drainage.

Extirpation of the Gland.—This operation is one of the most serious in the whole range of surgery, and should only be undertaken under the most favorable conditions. The patient should never be subjected to operation during an acute attack, but should be treated by ice applications to the heart, to rest, to X-ray, and in fact be placed under the most favorable conditions likely to procure some amelioration of the symptoms before any radical surgical interference is undertaken. The surgeon should remember that the vessels are likely to be dilated and distorted, that their relationship may be greatly altered, and that extreme care must be observed to prevent wounding any of them, and consequently causing severe or dangerous hæmorrhage. He should remember also that he is working in close proximity to various

important structures, injury to any one of which may seriously jeopardize the life of the patient. He should never lose sight of the fact that a goitre, no matter how small or circumscribed it may appear on the surface, may dip down behind the clavicle or sternum and thus cause grave danger from either respiratory distress or cardiac failure during its dislocation. These dangers should ever be borne in mind, and the surgeon ever ready to deal with them promptly the instant they occur.

The reverse trendelenburg position will be found to be the most satisfactory. The shoulders should be well raised and the head allowed to fall backward as far as possible without interfering with the breathing. This will render prominent the goitre and facilitate to a great extent its removal. As in the former operation, simple ligation of the vessels, ether should be the anæsthetic of choice.

As to the technic of the operation little need be said here, as a full description may be had from many recent text books on surgery. There are, however, a few points to which I would like to refer, the main one being the method of dealing with the parathyroid bodies, now known to be of so much importance in the surgery of the thyroid.

The gland itself is completely encased in a strong fibrous capsule, which on its posterior surface divides into two layers. These two folds are fairly constant in position, one passing behind the œsophagus while the other passes between this structure and the trachea. Behind the posterior layer usually lie the parathyroid bodies, two on either side. The upper one lies close to the side of the larynx and in intimate relationship to the superior thyroid artery, while the lower one lies immediately below the inferior thyroid artery. In order to preserve these minute bodies intact, it is well to leave in position the posterior sheath of the gland. This will in most cases insure their remaining *in situ*, and thus prevent the disastrous consequences, tetany, so liable to occur on their removal. They should always be carefully watched for in any case, as it sometimes happens they lie between the posterior layers of the sheath, and consequently may be easily removed.

In dealing with the recurrent laryngeal nerve, it must be remembered that it is very liable to be misplaced, especially if the goitre has a tendency to dip down behind the clavicle. If its normal relationships are kept well in mind, and especial care is exercised in watching for it, no great difficulty need be experienced. On the right side the nerve is closely associated with the inferior thyroid artery and usually passes over it from half an inch to an inch from the gland substance. On the left side it is

much more deeply situated, passing underneath the artery in nearly all cases.

In all contemplated cases of thyroidectomy, a complete laryngeal examination should be made before operation to ascertain the condition of the vocal cords. Especially is this advisable in those cases where there is pressure on one or both recurrent laryngeals and consequent voice affection.

In small parenchymatous goitres necessitating but slight traumatism in their removal, drainage may be dispensed with, but *all exophthalmic cases must be drained.* Great care must be exercised in uniting the platysma muscles, as by so doing a small and neat scar is ensured.

After Treatment.—The immediate after care in these cases is of the utmost importance. Upon being returned to bed the patient should be propped up at an angle of 45, and the head kept from moving freely by having pillows placed on either side. This will facilitate drainage, a very important matter in all cases of hyperthyroidism. As most of the cases on which a thyroidectomy is performed are in a very critical condition, it is small wonder that serious symptoms sometimes develop. These usually consist of great muscular twitching and increased rapidity of the heart's action. The former may be controlled by scopolamin in doses of from 1-200 to 1-100 in severe cases, while for the latter adrenalin may be given with caution, and in cases of extreme heart weakness camphorated oil in 15 minim doses may be given hypodermically every 15 minutes until beneficial results are obtained.

Probably the most useful post-operative treatment and that which should be used in every case is the administration of normal saline solution. This is given to greatest advantage by the bowel by the continuous method, though should any diarrhœa be present, or for any reason the saline not be retained, it may be given subcutaneously. The chief benefit to be derived from this salt solution is in the fact that it delays absorption, one of the most potent dangers following thyroidectomy in hyperthyroidism.

No solid food should be allowed for some days, while on the other hand fluids in large quantities should be given, consisting mainly of hot water, tea, egg albumen and such drinks. The drainage tube should be removed on the second or third day at most, according to the amount of discharge. The stitches may be removed with safety on the fourth day. An aperient should be administered on the second day, and in all but the most serious cases the patient may be allowed to sit out of bed any time after the third day.

Selected Articles.

HAEMORRHAGE INTO THE PERITONEAL CAVITY CAUSED BY ACCIDENTAL RUPTURE OF THE OVARY*

By A. Primrose, M.B., C.M. (Edin.), M.R.C.S. (Eng.), Toronto.
Surgeon to the Toronto General Hospital.

As the result of a severe strain a blood cyst of the ovary may rupture and cause serious or even fatal hæmorrhage into the peritoneal cavity. After careful consideration of the two cases recorded in this paper, together with a study of the literature of intraperitoneal hæmorrhage of ovarian origin, one must inevitably conclude that such an accident is not only possible but that in all probability it is of much more common occurrence than we imagine.

The most common cause of intraperitoneal hæmorrhage in women is dependent upon an extra-uterine gestation. It is no doubt true, as has been suggested by some writers, that the possibility of other etiological factors being active in its production has been overlooked, because in an enormously large percentage of cases a ruptured ectopic pregnancy is found to be the source of the bleeding. An analogy exists in the confident fashion in which surgeons diagnose appendicitis whenever localized peritonitis manifests itself in the right iliac fossa. In the vast majority of instances such conclusions are correct, but with wide experience we are led to believe that, as a fact, an absolutely assured diagnosis of acute appendicitis is rarely possible.

In this paper we are not concerned with a ruptured ectopic pregnancy as a cause of intraperitoneal hæmorrhage, excepting perhaps to be reminded of the indirect effect of an extra-uterine gestation in causing a congestion of the ovary, which may in turn lead to the production of hæmorrhagic cysts, and these may rupture. This fact should be borne in mind by the operating surgeon; both ovaries should be carefully examined during the operation, else a fatal error might be made in failing to check hæmorrhage from an ovary which is in no way connected with the gestation sac.

The cases which I now record were not connected with pregnancy. In both instances what appeared to be a normal Graafian follicle had ruptured as the result of an accidental strain. In

*Read before the American Surgical Association, May 29, 1912.

one instance the patient lifted a heavy weight and the rupture immediately occurred. In the other case the patient had a violent attack of vomiting in the early stage of an acute appendicitis and this brought about a similar result. In both instances serious hæmorrhage occurred into the peritoneal cavity and almost proved fatal in one of my patients. The histories are as follows:

CASE I.—*Profuse hæmorrhage from the accidental rupture of a Graafian follicle into the peritoneal cavity. The rupture was caused by a strain while lifting a heavy weight. Operation. Recovery.*

Mrs. R., age thirty-five, was the mother of twin boys three and a half years old. There had been no other pregnancy. The menstrual history was normal. Two days before her period was due, at eight o'clock in the morning, while attempting to lift a heavy chest she experienced sudden severe pain in the lower part of the abdomen. She became nauseated and had frequent attacks of vomiting during the day with continuance of the pain. Twelve hours after the onset of her trouble she was seen in consultation. She was very anæmic, her face bore a pinched and anxious expression. Her temperature was 97.6° F. and her pulse 130. There was marked abdominal distention with a wall uniformly rigid. Palpation at once induced vomiting. There was general tenderness, but this was more marked in the left iliac and hypogastric regions. *Per vaginam* a mass was felt which crowded the uterus down and fixed it firmly. Pressure on this mass induced great pain. On opening the abdomen a very large quantity of blood was found free in the peritoneal cavity. This was fluid in the upper part of the abdomen, but in the pelvis and about the uterus it was clotted. The clot showed some tendency to adhesiveness, sufficient to account for the fixation of the uterus. The left ovary was somewhat larger than normal, and upon its upper free border existed a ruptured hæmorrhagic cyst the size of a hazel-nut. Arterial blood was spurting in a pulsatile fashion from a definite point. The ovary and tube were removed together with much of the clots and fluid blood. The right ovary and tube were normal.

The patient made an excellent recovery, but for the first ten days an evening temperature of about 100° F. was noted. This doubtless was due to the peritonitis which is more or less an invariable accompaniment of hæmorrhage in this locality.

The pathologist reported that the specimen in the gross showed a corpus luteum (2½ x 2 cm.) with evidence of recent rupture. There was no pregnancy.

CASE II.—*Hæmorrhage into the peritoneal cavity due to a ruptured Graafian follicle complicating an attack of acute appendicitis. The rupture was caused by strain induced by a violent attack of vomiting.*

The patient was forty years of age, married, and an exceptionally active woman. A few years previously she had a small cystic adenoma removed from the breast. She has had occasional attacks of indigestion characterized by flatulence and abdominal distress, and there has been a tendency to constipation. The menstrual history was normal, and her present attack developed two days before a period was due. She had never been pregnant.

At two o'clock in the morning she wakened with acute pain in the abdomen. She had been at the theatre the night before, and on her return home had felt some distress and unrest in the abdomen but no definite symptoms of local trouble. In the morning her physician found her with a normal pulse and temperature and complaining of some tenderness over the lower part of the abdomen. An enema at 10 a.m. was followed by a violent attack of vomiting, which left her very sore and with definite tenderness in the right iliac region. At 6 p.m., in consultation, one found acute pain on pressure over the appendix region with slight but marked local rigidity. The pulse was 80 and the temperature normal. She had no nausea. A diagnosis of appendicitis was made.

Operation was performed at 10 p.m., 20 hours after the first appearance of symptoms and 12 hours after the violent attack of vomiting. The moment the peritoneum was opened in the appendix region fluid blood welled up in the wound in large quantity. Toward the pelvis some dark clots were found. An incision was now made in the middle line and a large quantity of dark blood-clot was found filling the pelvis. The left ovary and tube were normal. The right ovary was considerably enlarged, and a cyst about the size of a hazel-nut was ruptured on its anterior aspect. Adherent to this was a blood-clot. It was quite obvious that the ruptured Graafian follicle was the source of the hæmorrhage. The ovary and tube were removed. Attention was now turned to the appendix, and through the primary incision in the right iliac region one removed that organ, which was acutely inflamed and adherent. The pathologist made the following report on the material removed:

"The specimen received consists of appendix, ovary, and distal portion of the tube. The ovary is enlarged and ruptured on its anterior aspect. Adherent to the ruptured portion is a fairly

large amount of clotted blood. Microscopical examination: The appendix shows acute inflammation in the mucosa and also an acute peri-appendicitis, as evidenced by the presence of fibrin and pus on its peritoneal surface. Sections through the ovary show the remains of a Graafian follicle which has ruptured into the peritoneal cavity and from which hæmorrhage has taken place. There is no evidence of pregnancy or malignancy."

The sequence of events in this case is quite obvious. The patient had an attack of acute appendicitis two days before her monthly period was due, and a violent attack of vomiting had brought about rupture of a Graafian follicle. The hæmorrhage into the peritoneal cavity had been slow, and had shown no symptoms, but was only discovered when the abdomen was opened for the removal of the appendix twelve hours afterward. Had the patient been left until morning she not only would have run considerable risk from an attack of acute suppurative appendicitis, but she might have lost her life from hæmorrhage.

These two cases have some points in common. Thus an accidental strain caused rupture of an ovarian blood cyst and induced the hæmorrhage. In both the Graafian follicle was ruptured two days before a menstrual period was due. In each instance one observed that the extravasated blood was clotted in the pelvis and had remained fluid in the upper part of the peritoneal cavity. This last observation may bear some relationship to the circumstance that the pelvic and lower abdominal zone of peritoneum shows greater resistance to septic trouble than the upper regions of the peritoneum. The local conditions which lead to a higher degree of resistance may likewise favor clotting and induce the tendency to adhesiveness which on the one hand in the presence of effused blood leads to the production of the so-called pelvic hæmatocele and on the other hand by the production of adhesions may produce a localized abscess well walled off from the general cavity. Pus like blood is more likely to become diffused and to remain free in the upper zones of the abdomen and more likely to be limited by adhesions in the pelvis and in the lower abdominal zones.

Jayle, in his paper on retro-uterine hæmatocele caused by the rupture of a blood cyst of the ovary, is very emphatic in his opposition to the usual teaching regarding the etiology of pelvic hæmatocele, for example, he calls attention to the fact that Pozzi in his treatise on gynæcology makes a statement, printed in italics, intended as an aphorism for the guidance of practitioners which reads as follows: "*L'hématocèle enkystée est un accident*

de la grossesse ectopique." In English text-books, likewise, little attention is paid to this very important subject. The frequency with which an ectopic pregnancy is found to be the source of the bleeding has so impressed the various writers of such works that they treat this aspect of the subject in an exhaustive fashion, but give scant attention the possibility of rupture of an ovary causing hæmorrhage in the absence of pregnancy. The writer in Kelly and Noble's treatise on gynæcology and abdominal surgery makes no mention of free hæmorrhage into the peritoneal cavity. He says that "a pelvic hæmatocele is formed of an effusion of blood into the peritoneal cavity which subsequently becomes incapsuled. In the great majority of cases the condition results from tubal pregnancy . . . other causes of pelvic hæmatocele rarely exist." Webster dimisses the subject by saying that occasionally an effusion of blood may be brought about during menstruation usually from sudden strain, and mentions the fact that this may occur with the rupture of a Graafian follicle. Hermann enumerates the causes of great hæmorrhage into the peritoneal cavity as (1) rupture of a pregnant Fallopian tube; (2) rupture of a varicose vein; (3) rupture of an ovary; (4) rupture of the gravid uterus. He makes the following interesting statement: "There is a physiological bleeding, not enough to give trouble, into the Graafian follicle with ovulation. It has been supposed that this physiological congestion may, by accidental causes acting shortly before the time of ovulation, be so increased that the bursting of a Graafian follicle will cause bleeding enough to form a hæmatocele. This is theory; there is no evidence that a healthy ovary ever bleeds enough to form a hæmatocele." Hermann, however, states that when a blood cyst forms pathologically in an ovary it may assume large proportions and the hæmorrhage from this may be sufficient to kill the patient.

The possibility of serious hæmorrhage occurring from rupture of a Graafian follicle was recognized as far back as 1851 by Nélaton, by Rokitansky in 1855, and by Puech in 1858. The last author applied the term "apoplexy of the ovary" to the rupture of a Graafian follicle, which he says may cause fatal hæmorrhage into the peritoneal cavity. It has been suggested that these older writers did not recognize ectopic pregnancy, which it is claimed must have been a cause which was overlooked in many of their cases. It is true that no very special attention was given to extra-uterine pregnancy until 1883, when Lawson Tait first operated for its relief, and there can be no doubt that many cases described as hæmorrhage of ovarian or tubal origin were really those of

ectopic gestation. But some of the more minute details are given in certain cases by these older authors, which seem to show beyond doubt that they had cases of serious hæmorrhage from ruptured ovaries in the absence of pregnancy.

The writer wishes to urge that more attention should be given to accidental hæmorrhage from the ovary such as is illustrated by the two cases herein recorded. The condition is probably not extremely rare; thus one finds numerous instances in searching the literature. For example, Wilson reports eight cases of hæmatoma of the ovary occurring in the clinic at St. Bartholomew's Hospital; Holmes records two cases of pelvic hæmatoma of ovarian origin; Hind reports a case of a very large intraperitoneal extravasation of blood from rupture of a Graafian follicle of the left ovary. The patient recovered after operation. Penny describes a somewhat similar case of hæmorrhage from the right ovary; Lockyer records three cases of extensive intraperitoneal hæmorrhage of ovarian origin; Fordyce reports two fatal cases of peritonitis following menstrual suppression, in one of which the bleeding, which had come from a cyst in the right ovary, had led to the formation of an encysted hæmatocele which suppurated. Jayle reports 17 cases—3 under his own care and 14 from the literature. In two of these a blood cyst was ruptured during examination under an anæsthetic. Doran reports a case of hæmorrhage into an ovarian cyst due to torsion of its pedicle.

The tendency to development of blood cysts of the ovaries in a bilateral fashion is quite striking—so much so that our judgment must be markedly influenced by the circumstance. Jayle called attention to this fact, and in one of his cases, where he had operated for hæmorrhage from a ruptured cyst of the ovary on one side, the symptoms recurred some months after, and he had to remove the other ovary for a similar condition. He advocates double oöphorectomy when called upon to operate, particularly in women no longer young. This suggestion of bilateral development implies a pathological condition of the implicated ovaries. Jayle considers this to consist of hypertrophy and exaggerated development of the ovarian capillaries. The rupture of such bilateral hæmorrhagic cysts is also described by Hedley, Lockyer, and by Giles.

A number of cases are on record where an error of diagnosis has been made because the condition present simulated acute appendicitis. Two of the cases reported by Lockyer were examples of this, and were operated on by Mr. Stanley Boyd; in each a hæmatocele was present, but the appendix was normal. Wilson

also mentions this error in diagnosis and in addition an instance where the diagnosis of perforated gastric or duodenal ulcer was made. The local signs of the trouble in the right iliac fossa, with vomiting and elevation of pulse and temperature, may so simulate acute appendicitis as to make a positive opinion impossible. The diagnosis, too, from a ruptured ectopic gestation cannot always be made until the abdomen is opened or the implicated organs carefully examined in the laboratory. Again these two conditions may co-exist.

As far as I am aware, the second case recorded in this paper is the only one in the literature where an acute septic appendicitis was complicated by serious intraperitoneal hæmorrhage from the accidental rupture of a Graafian follicle. It suggests to the writer that possibly some of the instances of fatal peritonitis reported, in which the rupture of a blood cyst of the ovary was looked upon as the primary cause, really had their origin in an acute appendicitis or some such analogous septic condition, and that the rupture of the ovary was an accidental accompaniment due to strain, with something like the sequence of events described in my case. This view is further strengthened by the fact that in some instances the amount of blood effused was extremely small, and the authors have expressed surprise that such a small quantity of blood should have produced such grave results.—*Annals of Surgery.*

THE TREATMENT OF SIMPLE FRACTURES

By Charles W. Cathcart, F.R.C.S.
(*In the Edinburgh Medical Journal.*)

Three methods are now employed—the old immobilization, the massage and early movement of Lucas-Championnière, and the immediate operation advocated by Arbuthnot Lane.

1. *The immobilization method* consisted in setting the broken bone and fixing firmly with splints not only the seat of fracture but also the joint above and the joint below it. This immobilization was kept up until the bone was united—a period varying from 3 to 6 or 8 weeks. After that in many cases the limb was enclosed in plaster of Paris for several weeks to allow the union to solidify. On removal of the plaster the patient was told to use the limb. He generally did so with great difficulty, and a long and tedious convalescence was required to restore more or less completely the functions of the joints and muscles.

The theory was that bony union could not take place if there was the slightest movement at the seat of fracture. This is now known to be erroneous. Broken ribs heal readily in spite of the movements of respiration, and the success of the massage and early movement treatment has removed any doubt on the subject. The rigid fixation impedes circulation and so delays union of the bones, while it permits of adhesions to form in and around joints, also between muscles and around nerves. It is generally difficult and often impossible to get rid of these adhesions.

2. *Massage and early movement* introduced by Lucas-Championnière. Splints are used only to a limited extent, and the object is to prevent displacement, *i.e.*, to obviate mal-union, not non-union. They are not, however, discarded altogether, as some suppose. Massage is used as soon as possible after the fracture, and is continued daily at first and afterwards at longer intervals. The object at first is to relieve muscular spasm and disperse effusion, afterwards to promote absorption of effused blood and lymph and maintain the nutrition of muscles. Combined with massage, movements of the adjacent joints, both active and passive, are cautiously employed to prevent formation of adhesions in tendon-sheaths and joints, and to maintain the nutrition of the muscles.

The theory of this treatment is that rapid healing of the broken bone is promoted by the free circulation which is encour-

aged, while adhesions are prevented and the nutrition of the muscles maintained. Exact apposition of the broken ends of the bone is considered in most cases to be less important for future usefulness of the limb than free use of the joints and muscles. This has been proved in many forms of fracture. The bones heal much more rapidly than was believed possible under the older treatment, and the muscles and joints are ready to resume their function when the bones are firm. The objections raised against this method are that it requires too much time and attention, and that it does not give good results in every case. What these cases are will be considered, but in suitable cases the results amply justify the trouble. The manipulations can be learned by any practitioner and under his direction can be carried out in most cases by some sensible friend of the patient. Professional masseurs do not generally treat fractures well, and in any case they require special instruction. They are not sufficiently cautious and gentle. In mining or other industrial centres it ought to be possible to have persons available who have been taught to carry out the treatment under instructions.

3. *Immediate operation.* This is recommended by its advocates in most fractures of long bones in children and adults, especially of the lower limb, and in probably the majority of fractures involving joints. Under a rigid aseptic technique the ends of the bone are exposed, blood clot removed, and the broken fragments adjusted and held in exact position by steel plates fixed into the bone with screw nails.

The theory is that, in the lower limb especially, restoration of function demands mechanical restitution of the shape of the bone, that without this union is delayed, and pain is necessarily caused when the limb is used, by the altered strains in the bones resulting from the change in its shape. It may be granted that exact reposition of the broken ends will hasten reunion, but no account is taken of the additional laceration of the soft parts involved by the operation nor of the delay in obtaining functional restoration owing to disuse of the muscles and joints during the healing of the wound. Again, the marvellous adjusting power shown in the process of repair in response to functional demands is underestimated. This is especially true in fractures in children. One argument for operation is the bad results of the old immobilization method. But the pain and stiffness is in most cases due not so much to imperfect restitution of the form of the bone as to adhesions and other changes in the soft parts traceable to the prolonged fixation. Another argument is based on skiagrams

taken of fractures before they were plated, but these do not always represent the best position attainable without operation, and give a false impression of the mal-position that would have followed non-operative treatment.

Operations on recent fractures require much surgical skill and a thoroughly reliable technique, otherwise bad functional results, amputation, or even death may result. This, of course, does not affect the merits of the method in competent hands, but it does make desirable a method which is more widely applicable with safety and gives satisfactory functional results. Such is furnished by Lucas-Championnière's massage and movement treatment.

The writer suggests the following fields of application for the three methods:

1. The rigid immobilization method may now be modified since the massage and movement method has shown that some movement is no obstacle, but rather a help towards union. It is seldom necessary to secure the joint above and the joint below the fracture unless for comfort, and the limb may be massaged and the joints moved as often as convenient. This modified immobilization method gives good functional results in children in most fractures of the shafts and in adults in the same fractures (shaft of femur excepted) if there is no great displacement of the fragments nor severe laceration of soft parts. In fractures of the femur in adults, however, prolonged fixation is apt to lead to trouble in the knee, as will be explained.

2. Massage and early movement give more rapid results than modified immobilization in the classes of case just mentioned, although the final results may not be much better. It is also the method of choice for fractures near or involving joints, such as fractures of the olecranon, and many fractures involving the elbow in children, so long as they do not require immediate operation (see next paragraph), and in fractures of shafts with much laceration of soft parts and irregularity at the seat of fracture, so long as there is not much angular or axial deformity nor necessity for complete restoration of length of limb as in the lower limb of men in the public services. It is also to be preferred to the modified immobilization method in fractures suitable for operation which is contra-indicated by the patient's age or constitution, to local sepsis or other cause.

3. Immediate operation when reliable technique is available is the method of choice in transverse fracture of the patella in healthy adults, in joint fractures when the fragments mechanic-

ally hinder movement, when the important muscular attachments are torn off and cannot be approximated, when a nerve is involved or soft parts prevent the fragments from coming into contact, when angular and axial deformity cannot be restored by manipulation or posture, especially in the lower limb, or when the occupation necessitates walking without a limp, as in the army or police force.

Sometimes the swelling after an injury makes it difficult to diagnose the exact seat of the fracture and the position of the fragments. In doubtful cases a skiagram should be taken as soon as possible; failing this a careful examination under chloroform is advisable with accurate comparison of the injured with the sound limb by measurement, after the best possible restitution.

The application of these principles may be illustrated by 3 common fractures.

1. *Colles' Fracture.*—Reduction is advisable not only to minimize deformity, but also to insure movement at the wrist as fully as possible. When the articular surface of the radius remains looking slightly backwards instead of slightly forwards, as it normally does, the wrist in virtue of this alteration acquires an increased range of dorsiflexion and loses some of its range of anteflexion, quite apart from adhesions. In most cases a general anæsthetic should be given. The hand should be extended in the dorsiflexed position and gradually brought forward, while the back of the lower fragment is pressed down and forward by the operator's thumb. A splint is provided for the anterior surface, either Carr's anterior splint or a wooden splint with a pad to fill the palm of the hand, and the hand and forearm are lightly bandaged to it. A posterior splint is optional. During massage the hand and forearm are laid on a pillow. Warm fomentations and gentle massage give relief to pain which is severe at first. Massage to the wrist and forearm applied at the first sitting is repeated daily, the criterion of correct massage being that muscles are soothed, swelling rapidly reduced, and yet no pain caused. Passive movements following the massage are confined at first to the fingers and carried to the wrist as pain subsides. Active movements of the fingers begin about the third day. The splint is discarded in 10-14 days, and the hand removed from its sling in about 3 weeks.

The chief cause of disability is adhesions in the posterior tendon sheaths and in the wrist joint. They seldom form when the massage and movement treatment is properly carried out. When they occur in spite of massage and movement they are most fre-

quently the result of osteo-arthritis in the injured part. The support of the forearm and wrist are given primarily for comfort and ease, and secondarily to prevent recurrence of deformity which would be apt to result from spasms of the muscles if the injured part were not supported.

Operation is seldom, if ever, called for, and immobilization is likely to do much harm. Massage and movement have given excellent results, and restored to usefulness hands which by the older method would have become permanently stiff.

2. *Pott's fracture* varies much in severity. In most cases it is possible to restore the position of the foot either at once with or without an anæsthetic or within a few days, as the spasm of the muscle subsides under massage. The deformity most apt to be overlooked is backward displacement of the foot. If not remedied it will curtail dorsiflexion at the ankle and leave a permanent limp. Eversion of the foot is more easy to recognize, but if allowed to remain is a source of disability in walking. A strain is put on the ligaments and tendons at the ankle when weight is borne upon the limb, and this besides causing pain excites a chronic inflammation in the neighborhood, which in turn increases stiffness. While therefore massage and movement is the method of choice, an operation may occasionally be necessary Prolonged fixation is apt to lead to stiffness of the ankle. The writer generally uses a box splint, but when eversion is troublesome Dupuytren's splint is the best, and every now and then Syme's stirrup splint is required to prevent recurrence of backward displacement of the foot. During massage the splints are removed, and the limb steadied by an assistant.

3. *Fracture of the shaft of the Femur.*—The writer prefers treatment by extension and local splints after reduction under chloroform, combined with massage and early movement. There is a great difference in the results in children and adults. In children perfect recovery of function usually occurs, whatever the method. Operation and plating for a simple fracture are quite unnecessary.

In adults the case is different. The muscles are massive and powerful, and swell rapidly from infiltration with blood and serum. Through this thick covering no one can determine the form of the fracture or accurately adjust the ends into alignment even under the deepest anæsthesia. Accuracy of alignment depends less on the surgeon's skill than on the nature of the fracture. If the fracture is transverse the broken ends will override and be separated by the thickness of the shaft: if the break is

oblique the ends although still overriding will lie more nearly in line. In either case some shortening in spite of heavy extension seems inevitable. On the other hand, except in the rare cases of interposition of soft parts we may expect bony union, and, given time, the union will become strong enough to bear not only the man's weight but heavy loads besides. The popular belief that the seat of fracture becomes stronger than the original bone seems to be correct, perhaps even more so when there is deformity than when there is not. The strain is a stimulus to the consolidation of the callus which is affected by it, but the greater the strain owing to altered shape of the bone the longer the delay in solidification, and of course also the more the overriding and angling the greater the amount of shortening and limp.

Besides the causes of disability traceable to altered mechanical conditions in the united bone there are others associated with the muscles. One is the involvement of the quadriceps in the callus —this limits flexion of the knee. Another is atrophy of the muscles, especially of the quadriceps, from disuse. The resulting weakness prevents the patient from bearing his weight on the limb. This cause of disability often escapes observation, and the bone is supposed to be at fault. These muscular changes will improve under massage and exercise, and in many cases disappear unless immobilization has been continued too long, but even under Championnière's règime steady perseverance with massage and voluntary effort is required for some time after union. When the patient refuses to make an effort and shirks treatment, as often occurs in workman's compensation cases, the disability will drag on indefinitely.—*The Medical Review.*

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, F. A. CLARKSON, BREFNEY O'REILLY AND F. C. HARRISON.

Pathology and Treatment of Cardiac Asthma

Rosin (*Deutsche medizinische Wochenschrift*) speaks of the nocturnal onset, the mechanical oppression which serves as a sort of aura to the paroxysm, the high degree of orthopnœa, the fact that the case seldom comes to physical examination on account of the labored breathing and restlessness. The exact mechanism of the attacks is not known. The condition is symptomatic of many affections—arteriosclerosis, especially of the coronary arteries, embolism in the same and in the pulmonary vessels, myocarditis, aneurysm, nicotinism. It is likely to be confounded with spastic bronchial asthma and in extreme degrees of the latter diagnosis may be all but impossible at first. The history of the attacks and the exclusion of certain causal factors in cardiac asthma, with the presence or absence of emphysema will make for a proper differential diagnosis. Renal asthma may require differentiation although both forms may occur under identical circumstances. The two conditions, however, are radically distinct for uremic asthma is due to circulating toxins while cardiac asthma is the result largely of mechanical conditions. There should be no confusion with nervous asthma. The best remedies for the attacks appear to be camphor and caffeine, given by intramuscular injection. If the emergency is sufficiently acute some digitalis derivative should be injected intravenously. Morphine injection is often used as a synergist. An icebag should be placed over the heart as a physical stimulant and venesection will at the same time relieve the strain on the organ. The patient should be propped upright and inhale oxygen.—*N. Y. Med. Record.*

Duodenal Ulcer

Hans Kehr (*Münchener medizinische Wochenschrift*) asks why it is that Mayo and Moynihan diagnosticate and operate on so many cases of duodenal ulcer, while in Germany the converse is the case. Does this contrast redound in any way against German surgery? The author has been in the United States and as

far as diagnosis is concerned found no superiority there over German colleagues. The latter, however, are more conservative when it comes to laying down operative indications; while the American public appear to be far better disposed to trust themselves to the knife than are the Germans. There is also perhaps a disposition on the part of some American and English surgeons to operate for a record or as a cure-all. They do not adhere to the maxim that it is better to be a physician first and an exciser of ulcers or appendices afterwards. The author regards it as a higher art to forego operation in select cases than to operate broadcast. Despite the author's record as a gallstone operator he rather prides himself more on what he forbore to do than on his record. Full credit is given to the Mayos for their immense activities and low mortality. The gospel of early intervention is preached and practised by them to the full. But the great reputation, the strong personality, the belief in operating, on the part of the surgeons, and the willingness of the patients to submit to operation, are all powerful factors in determining the amount and character of the work. Perhaps the same aggregate of good could be attained with far less surgery.—*Medical Record.*

Treatment of Migraine

Léopold-Lévi, in a paper read before the Société de thérapeutique, Paris (*Revue de thérapeutique médico-chirurgicale*), stated that he considered migraine to be due in many instances to disturbed function of the thyroid gland. Where the thyroid activity is deficient, the attacks appear at the time of the menses, in the presence of excessive thyroid function; on the other hand, they may occur at any time. A third, intermediate type, in which there is merely some perversion of the glandular secretion, partakes of the characteristics of both the others. In the first type mentioned, thyroidin may be given in an initial dose of 0.1 gramme; in the second, 0.005 gramme, and in the third, 0.025 gramme. The treatment should be kept up for twelve to eighteen months. The author presents numerous corroborative cases in which migraine had been absent for two or three years as a result of thyroid treatment.

There is also an ovarian form of migraine. This should be treated with ovarin in doses of 0.2 gramme twice a day, or with corpus luteum in 0.1 gramme doses, but the results are not as striking as with thyroidin. The latter will often lead to an unexpected recovery in cases where other drugs and correction of digestive disorders by a suitable diet have failed to bring relief.—*N. Y. Med. Journal.*

Reports of Societies

AMERICAN PROCTOLOGIC SOCIETY

Fourteenth Annual Meeting held at Atlantic City N.J., June 3 and 4, 1912.
The President, Dr. John L. Jelks, of Memphis, Tenn., in the chair.
The following is an abstract of the principal papers read:

Relationship and Duties of the Proctologist to the Profession

By John L. Jelks M.D., of Memphis, Tenn.

He stated that this society was an innovation when organized —a strange vessel on the high seas. A child of American medicine, it has now become a sprightly youth, with ambition and strength of purpose, having and exercising authority. The medical world recognizes as authoritative, the expressions of its fellows in the field covered.

He admonished discretion, thorough description and perfection of technique. Hasty speech or carelessly written papers cannot be erased or changed—as in their publication they become a permanent record. He referred to the theories of our science, which were born of dreamers and nurtured by enthusiasts, and fancies no solid superstructure could be reared on foundations so infirm, and added that neither these, nor the honor, distinction, nor the gain they held out, should be sufficient to determine the surgeon to make merchandise of theories. He called attention to the obstacles this society had encountered, because of these fragile theories, which had previous to its existence, been set up as targets for those who were unfavorable to the development and progress of this specialty.

He considered the true surgeon and specialist as a humanitarian, whose purpose in life is to save life, restore health and happiness, and admonished him to shield and protect his brother from the darts aimed to destroy. He also referred to cancer in the rectum, sigmoid or colon, which may have been treated as of minor significance until metastases are so extensive as to preclude hope of a cure. He praised those proctologists, who have with much patience and fortitude labored for and finally have overthrown that unfortunate assignment of malignant rectal and colonic cases to untimely graves. He alluded to the intra and extra-rectal and anal and colonic infections, the roll they play and the possible developments of vaccine therapy and antitoxins

in combating them. He referred to the fact that few of the hospitals of this country permit additions to their staff of specialists in proctologic work, hence the general surgeon and the general practitioner are doing the work in these institutions, about as these same men would do the ophthalmologic work, etc.

Patulous Anus: Its Clinical Significance

By Alfred J. Zobel, M.D., of San Francisco, Cal.

The condition of patulous anus results from an abnormal loss of tone in the sphincter muscles, which may be due to either a fault intrinsically within the muscle, or to some disturbance in its nerve supply. When purely muscular the cause may be a direct injury to the muscle, an infiltration by a malignant or a syphilitic growth, a participation in the general muscular weakness, or the presence of a foreign body in the rectum which prevents the muscle from completely contracting. When the nerve supply to the sphincters is at fault the causative lesion may be either central or peripheral.

Complete fecal incontinence does not necessarily follow when the anus becomes patulous. The external spincter, when but slightly affected, sometimes is assisted in performing its function by an extra effort of the will and through augmenting the muscle's action by strongly contracting the glutei muscles and bringing them together.

A brief report of a few very interesting cases of patulous anus is given to illustrate the different causes of this condition; among them being a case of infiltration of the sphincters by a carcinomatous growth low down in the rectum; a case, the result of pederastic practices; a case, the result of a participation in the general alcoholic neuritis; cases where it occurred in low intussusception of the bowel in children; and two cases where it appeared as one of the early signs of locomotor ataxia.

The Surgery of Colonic Constipation; a Report of Thirteen Cases

By Louis J. Hirschman, M.D., of Detroit, Mich.

After presenting the histories, radiographs and reports of operative treatment of thirteen cases of obstipation due to colonic

obstruction, dilatation, stricture and adhesions, Dr. Hirschman has formulated several principles in dealing with his cases requiring colonic surgery. They are epitomized in the following conclusions:

1. Most cases of chronic constipation are colonic in origin and many are obstructive in type.

2. Many cases of so-called chronic constipation are therefore really colonic obstipation.

3. Many cases of colonic obstipation suffer from chronic dilatation of the colon with or without ptosis.

4. Radiography is a most vital necessity in the diagnosis of all cases of chronic interference with bowel function. Its negative value may be greater than its positive.

5. A chronically, over-distended colon whether adherent or not, never again becomes a normally functionating bowel.

6. Intestinal adhesions usually tend to recur in increased intensity and adhesions only cause symptoms when put under stress or tension.

7. The prevention of tension in physiologic rest to the affected organ and colonic rest is obtained only by colectomy, colostomy, or exclusion.

8. Colectomy as advocated by Lane is an operation seldom advisable and has many obvious objections from the standpoint of patient and physician. It is too grave a procedure to be undertaken except in the most aggravated cases.

9. Strictures, neoplasms and other obstructions should be removed by excision of the diseased tissue and lateral anastomosis of the bowel.

10. Exclusion by ileo-colostomy is safe, easy to perform, and most satisfactory in the restoration of normal peristalsis and consequently normal health.

11. Results speak more eloquently than words. After an experience with nearly fifty cases requiring exclusion or resection of the colon for obstructive constipation with but one failure, I feel fully justified in recommending it to your careful consideration in all cases of aggravated colonic obstipation whether congenital, post-operative, or dependent on some mechanical obstruction or narrowing of the bowel.

The Roentgenologic Method of Examining Cases of Constipation and Obstipation—a Method of Visualization of Abdominal Lesions of the Intestinal Tract

By Arthur F. Holding, M.D., of New York City, N.Y.

The author noted that current text-books on diagnosis written by eminent authorities are still copying cuts which were drawn by some artist rather than by an anatomist. Let us hope that the striking proof furnished (by the X-rays) of the fallacy of such teaching will be effective, and perhaps not one of the least results will be to cause true illustrations to be placed before our students' eyes.

The normal position of the colon and the parts of the intestine that can ordinarily be visualized by means of bismuth ingesta and the X-rays are: (1) The first portion of the duodenum; (2) the jejunum; (3) the ileum; (4) all parts of the colon; in some cases the second and third portions of the duodenum and the appendix, can be visualized.

In the first place, this method does not cause gastro-intestinal symptoms, such as nausea, vomiting, diarrhœa, constipation, gastro-intestinal or general symptoms, other than are present when buttermilk alone is ingested; it is therefore logical to assume that the buttermilk-bismuth mixture does not irritate the mucous membrane and gives a true picture of the motor activities of the patient's intestines.

By fluoroscopy and by radiography in the erect or prone positions, or both, an accurate outline of the lumen of the tract can be obtained, especially where there is any obstruction to the onward progress of the intestinal contents. The individual peristaltic waves can be accurately registered on a special photographic emulsion that is far more sensitive than the human retina and the progress of the peristaltic waves can thus be seen functionating under normal conditions, the patient and his abdominal contents not relaxed by a general anæsthetic; the secretions and motility not disturbed by the presence of an irritating foreign body such as a stomach tube; the conclusion not based on inference deduced from chemical reactions of juices obtained by abnormal and irritating measures. The organic outline obtained in X-ray plates is even more conclusive and reliable than the information obtained by the sense of touch whether that be applied

over the intact abdominal wall or to the viscera laid bare by an exploratory incision. The radiographic emulsion and the retina are the two most sensitive methods of observation possessed by man, far outranking in their acuteness either the drum, membrane or the sense of touch. It has been contended that the abdominal operation was more accurate than an X-ray examination, because it laid bare the "naked truth," the finality of this argument is based more on the sound of the words than in fact, as anyone knows who has had an opportunity to use both methods on the same case.

Valvotomy

By George B. Evans, M.D., Dayton, Ohio.

Valvotomy is a justifiable operation, as it not only relieves obstipation and constipation, but often causes reflex and neurasthenic symptoms to disappear; frequently ameliorates and even cures proctitis, and by virtue of the drainage it secures, lessens the tendency to toxæmia from intestinal origin.

Multiple Adenomata of the Rectum

A REPORT OF A CASE WITH SYMPTOMATIC RELIEF BY SIMPLE REMEDIES.

By E. H. Terrell, M.D., of Richmond, Va.

This article was a report of a case of multiple adenomata of the rectum and sigmoid, in a patient 42 years of age, who had been suffering for the past five years. He had frequent stools with mucus, some blood and a great deal of tenesmus. He was having from eight to ten stools daily. He suffered considerable pain throughout the abdomen. Examination showed numerous small tumors scattered through the rectum and sigmoid. Microscopic examination showed these growths to be adenomata. The bowel was intensely inflamed and contained many ulcers. Under irrigation of the bowel with boric acid and the administration by mouth of castor oil and aromatic syrup of rhubarb, improvement was almost immediate. In three and a half months the patient

had gained seven and a half pounds, and was comparatively comfortable. The tumors were reduced in size and the ulcers gradually disappeared. While the adenomata are still present the patient is symptomatically cured.

Pigmentation of the Rectum and Sigmoid

By Jerome M. Lynch, M.D., of New York City, N.Y.

The paper was based on six cases which came under the observation of Dr. Tuttle and himself. He divided pigmentation into exogenous and endogenous.

After having reviewed the subject of pigmentation, he reached the following conclusions: That hæmochromatosis is of bacterial origin; that the extent of the disease is dependent upon the severity of the infection; that the probable source of infection is the intestinal tract, possibly starting as an intestinal putrefaction; that this intestinal putrefaction lowers the vitality of the tissues, and thereby the cells of the mucous membrane lose their protective properties, consequently bacteria find ready access to the portal circulation. As a result of this the chromogenic function of the liver is interfered with, consequently the liver becomes surfeited with pigment, and is not capable of abstracting the iron from the hæmoglobin, with the result that an excessive amount of pigment is circulating in the blood. That the cells of the intestine probably have a selective action for these pigments, and as a consequence they are deposited in the tissue. That local hæmochromatosis may be due to repeated local hæmorrhages, followed by infection, and that as a result of this infection the bacteria cause a hæmolysis of the blood, forming pigment which resembles hæmosiderin, hæmotoiden and hæmofucin. That these pigments may, or may not, give a reaction for iron.

So little is known about the structural products of melanin or melanoids, that it is difficult to give the origin of those bodies. Undoubtedly there are several distinct melanins, and their origins must also be distinct. The ferruginous melanins should be considered as originating from the blood pigment until further research proves the contrary.

Observations upon the Relationship of Tuberculosis to Peri-rectal Suppurations

By Collier F. Martin, M.D., of Philadelphia, Pa.

The author has found pulmonary tuberculosis so frequently associated with his cases of peri-rectal suppuration that he determined to report a consecutive series of cases, with findings.

The report comprises 376 consecutive cases, 75% being males, and ranging in age from 7 months to 87 years. The majority of these cases (322) occurred in the most active period of life, from 20 to 60 years. He divided his cases into four major groups; the actively tubercular (144 cases), the chronically tubercular (68 cases), the phthisenoid (20 cases), and those patients in apparently good health (55 cases). This would indicate that at least 212 cases or 61% were cases of known tuberculosis.

There were 309 operations performed on 306 patients, under various anæsthetics; spinal anæsthesia 145 times, ether 54 times, and local and other anæsthetics on the remaining. He chose spinal anæsthesia where no other preference was expressed by the patient or the attending physician, on account of the associated tuberculosis. Following these cases for the past four years he has traced thirty-seven deaths, of which thirty-four died of active tuberculosis or its complications. The abscesses or fistulæ in most of these cases could not be classified, from their appearance, as being locally tuberculous. Where the tubercle bacillus was easily recovered from the tissues or discharges, there was usually a very active pulmonary infection present.

Further Observations on Pruritus Ani: Its Probable Etiologic Factor Based upon Original Research

By Dwight H. Murray, M.D., of Syracuse, N.Y.

This paper was a continuation of the work that he has been engaged in for the past two years and which he presented to the American Proctologic Society, at the Los Angeles meeting in 1911.

From his experiences, since discovering that a skin infection, is the important factor in pruritus ani, he believes that we are now in a position to state that there may be two varieties of pruritus ani; one that may be coincident with some of the diseases of the rectum and in which the skin infection is not present. He designates this form as pruritus ani simplex; the variety, which is chronic, in its character, and. in which the skin infection is present, he designates as coccigenous pruritus ani.

He states that he is continually seeing patients who have all varieties of rectal diseases, including chronic diarrhœa and proctitis, in many of which there is a leakage of moisture upon the anal skin; in very few of these cases does he find pruritus ani, and he believes that when it is present, it is coincident rather than having been caused by these discharges occurring in various rectal diseases.

He gives a resume of an examination of 900 consecutive cases, in which he finds 490 cases of constipation, 369 of hæmorrhoids and 94 of pruritus ani. Of the 94 cases, which gave a history of pruritus ani, he find that 5.5% of the 900 cases examined who had pruritus ani were constipated; 2.3% had hæmorrhoids; 1.2% had some form of anal growth; 2.2% had ulceration; 2.5% had diseased crypts; 1.3% had hypertrophied papillæ; .03% had polypi; .03% had fistulæ. He believes that the relatively small percentage of each of these conditions that were present in the pruritus ani cases, show that they were coincidental when present and could not be classed as causes of pruritus ani.

Thirty-two of these 94 pruritus cases have been examined bacteriologically by him and all of them showed streptococcic skin infection as the predominating condition.

He believes that the excess moisture and the infiltrated condition of the skin in these cases is due to the low grade inflammation caused by skin infection and is not the result of moisture coming from the inside of the anal canal.

Colonic Dilatation, Congenital and Acquired, as a Factor in Chronic Intestinal Obstruction (Obstipation)

By Samuel G. Gant, M.D., of New York City, N.Y.

The author stated that his experience warrants the belief that both acquired and congenital (Hirschsprung's) dilatation of the

colon is fairly common, and that they respond satisfactorily to treatment (usually surgical). He said that non-congenital dilatation of the bowel might result from paresis, gormandizing, digestive disturbances or chronic intestinal obstruction, however caused, and when present, leads to constipation, fœcal impaction, distension of the bowel, angulation, twisting and ptosis of the colon. He called attention to the fact that this class of patients suffered much less from intestinal auto-intoxication than persons afflicted with acute constipation. In his cases, the colon completely filled the abdomen, measured from three to many times its normal size, was considerably thickened, characterized by dilated blood-vessels and closely resembled an enormously hypertrophied stomach.

Acute Post-Operative Intestinal Paresis

By J. A. MacMillan, M.D., of Detroit, Mich.

1. Definition.—A paralysis of a portion of the intestine which suddenly dilates and becomes the receptacle for gas and fœcal material.

2. Etiology.—Not known, but probably due to sepsis, trauma, etc.

3. The lesion is probably in the sympathetic nervous system.

4. The treatment consists of gastric lavage, enemata and enterostomy.

5. Precautions attending a secondary operation.

Some Practical Points Gleaned from the Observations of a Proctologist

By Samuel T. Earle, M.D., of Baltimore, Md.

Dr. Earle reported a case of primary tubercular ulceration of the right buttocks, which was not connected with the rectum by a fistulous tract. In this respect it differed from the one reported by him, in his work, on "Diseases of the Anus, Rectum and Sig-

moid," figure 62, page 201. It was excised by the thermo-cautery knife, after which it healed very promptly.

Dr. Earle also reported a very aggravated case of pruritus ani, which had resisted local applications, autogenous vaccines and treatment by the X-ray. Under local anæsthesia he found an ulcer over the posterior commissure just above the internal sphincter, which connected on each side with numerous submucous and subcutaneous superficial fistulæ which enveloped the entire anal margin and connected with each crypt of Morgagni. The ulcer was incised, the scar tissue, at its base removed, and the fistulous tracts were all opened up. There was only an occasional twinge of itching following the operation, and he made a speedy recovery.

The X-Rays as an Aid in Making Diagnosis of Conditions in the Rectum and other Portions of the Large Intestine

By J. R. Pennington, M.D., of Chicago, Ill.

He stated that while the rectum is easily inspected by various specula, and the sigmoid is less readily accessible by the use of sigmoidoscopes, such as the one with insufflation devised by him, the colon is inaccessible and its exact position difficult to ascertain. Very often it is also difficult to determine and locate pathologic conditions in the large intestines.

Until recently, the means of diagnosis have been limited to those used in other portions of the alimentary canal, viz.: Inspection after dilatation of the bowel with air or water, palpation, percussion and trans-illumination. All of these are open to the objection that they are uncertain.

The writer observed in the latter part of 1899, that by introducing some agent into the large bowel which would cast a shadow, the X-rays may become useful in making a diagnosis of conditions in the twin cavities. It is only recently, however, that such procedures have become of practical value.

A bismuth meal is useful in diseases of the stomach or duodenum, the agent being suspended in milk, acacia water, thick soup or some similar vehicle.

But for the large bowel, the action of bismuth per os is very slow. One author estimates that it requires from 12 to 15 hours

for the bismuth mixture to reach the ileo-cæcal valve; about 24 hours to gain the transverse colon, and 36 hours to penetrate to the sigmoid. By the method advocated this is done, so to speak, instantaneously.

Coming now to the technique. The patient's bowels are first cleansed by means of laxatives and injections. He is then placed in the knee-shoulder position, and from 25 to 30 ounces of the mixture used for casting the shadow injected into the large intestine. For this purpose the author uses an ordinary irrigator and a short rectal tip. A long rectal or colonic tube for administering the injection is unnecessary. After the suspension is injected the patient lies on his right side for a few moments so part of the menstrum may pass into the cæcum. He is then placed in either dorsal or ventral position on the radiographic table and the picture taken.

Editorials.

OSTEOPATHY

"The bill which was recently introduced by Dr. Jamieson, and which was withdrawn at the last session, contained a clause defining medicine, which, it is to be hoped, will be incorporated in a bill which will probably be passed at the next session of the Legislature. It is a great pity, as we all know, that this was not defined by the Legislature many years ago, when the Council was established in 1867, and it is desirable that the profession should be thoroughly conversant with the terms of this bill.

"The bill provides for the registration of any person who has matriculated in accordance with the requirements of the College of Physicians and Surgeons of Ontario, and holds a diploma granted by a school or college of osteopathy recognized by the American Osteopathic Association and has attended such osteopathic school or college for the time specified in the bill. It also provides for the registration of persons who have been practising osteopathy in Ontario prior to the passing of the bill, provided they hold such diplomas. It also provides that any person shall be held to practise medicine within the meaning of the Act who shall by advertisement, sign or statement of any kind allege ability or willingness to treat diseases, or to prescribe or administer medicines or treatment of any kind for diseases, defects, deformities or injuries, but specifies that this section does not apply to the practice of dentistry, pharmacy, the

usual business of opticians, vendors of dental or surgical instruments, apparatus and appliances, nurses, chiropodists, bath attendants or proprietors. Every person registered under this Act as a practitioner of osteopathy in the Province of Ontario shall be entitled to recover fees for professional attendance.

"This amendment to the "Ontario Medical Act," which permits of the registration of osteopaths, is not such a monstrous thing as it seemed at first. I take the view that a man is justified in practising any pathy he wishes, provided he has obtained a sufficient knowledge of the anatomy of the human body, its physiology, and the disease processes to which it is liable. It will be obvious to every sane man that such a knowledge is absolutely essential; for how can anyone attempt to treat a disease without understanding the nature of the disease in question or normal conditions?

"At the present time the public is at the mercy of a large number of uneducated charlatans, whose work is not only of no value in any real disease, but is often of a highly dangerous character. We have all met with cases in which this lack of knowledge has resulted disastrously to the unfortunate patient.

"If, as is proposed in the bill, those wishing to practise osteopathy must pass an entrance examination equal to that of any practitioner of medicine, and, in addition, pass a primary and final examination, which would include all the essential subjects, substituting their pathy for medicine, we should have no objection to their being licensed by the Ontario Medical Council. In this way the public would be protected by requiring of osteopaths a sufficient knowledge of these fundamental subjects, which is

absolutely essential before attempting to treat the sick. If, after they have passed these examinations, they still think there is any value in their particular pathy, we have no objection to their practising it. I would take a similar attitude towards any other pathy.

"When the Ontario Medical Council was organized the homœopaths and eclectics were taken in and the same examinations prescribed for them as for regular practitioners. What has been the result? The eclectics have practically ceased to exist. Very few homœopaths have been taking the examinations, as is shown by the fact that at the present time only 48 are practising in the Province of Ontario; but, unfortunately, I am unable to ascertain how many there were at the time of the formation of the Ontario Medical Council.

"The only objection I have to the bill is that it proposes to take in a number of graduates of certain American colleges without passing any further examination. I think that a clause should be added requiring all these men to pass an examination before being registered; and although we may, for the time being, have to accept qualifications which are decidedly less than those which will be exacted from future candidates, we shall certainly have made a material advance in securing for the public very valuable protective legislation.

"In support of the contention that those who are practising osteopathy at the present time should pass an examination I should like to briefly refer to the Carnegie report:—

" 'Amongst medical sectarians the committee includes homœopaths, eclectics and osteopaths, all of

whom admit in theory that medical education should be based upon the fundamental sciences of anatomy, physiology, pathology and bacteriology.'

"It is stated that the catalogues of the eight osteopathic schools in the United States are a 'mass of hysterical exaggerations, and fairly reek with commercialism.' Entrance standards are conspicuous by their absence. In the catalogue of the parent school at Kirksville it is stated that an applicant will be accepted if 'he pass examinations in English, arithmetic, history and geography,' but he may be admitted even if he fails to do this. The Cambridge School (Massachusetts) states that 'a diploma may be accepted or an examination required if deemed advisable by the directors.'

"Whatever his opinions may be on the subject of treatment it is essential that the osteopath should be trained to recognize and to differentiate between the diseases he professes to treat, and no one of these osteopathic schools is in a position to give the training in physiology, pathology, chemistry and bacteriology which 'osteopathy itself demands.' In none of them is there any effort to connect the 'laboratory teaching with clinical osteopathy,' and in none is there 'anything approaching the requisite clinical opportunities.'

"In the eight osteopathic schools there are now over 1,300 students, paying about $200,000 annually in fees, and for this they 'receive an education which is practically worthless.'

"All candidates who intend to practise surgery—whether osteopaths or not—should be required to pass a uniform examination in this branch of treatment. It is absolutely essential that all who under-

take the treatment of disease, irrespective of the form of treatment they propose to adopt, shall be educated in such a manner as to render them capable of distinguishing between the various diseases which may come under their observation."

HERBERT A. BRUCE.

THE ONTARIO MEDICAL COUNCIL AND OSTEOPATHY

"The Ontario Medical Council, true to the old adage, has in its hour of misery, selected a strange bedfellow. The miracle of the lion and the lamb being found in harmonious relations has been outdone, the puzzle being to say which is the lion and which the lamb. The osteopaths, under the protecting wing of the Medical Council, almost succeeded in passing legislation that would have enabled them to register in the Province of Ontario, and it is by no means certain that, with the encouragement already received, they will not be able to obtain their desire.

"A committee of the Medical Council boldly championed the cause of the men and women who had qualified at American colleges of osteopathy, so relentlessly exposed in the Carnegie Report, and the argument justifying such a course was that it would enable the council to hold the whip hand in dealing with the irregular practitioners. Just how this control was to be secured has not been made plain, and just how the honest medical student was to be compensated for the outrage inflicted on him is a greater mystery still.

"The last meeting of the legislative committee took place before as motley a collection of represen-

tatives of the various cults, fads, and fakes in medicine as it would be possible to gather together, while those who have the true interests of the profession at heart, sat quietly aside, plainly disgusted with the attempt to drag the traditions of an honorable profession in the mire. Evidently the jangle between osteopaths and divine healers, chiropractors, and bed actors, was too much even for a legislative committee, and they seemed quite willing to adopt President Falconer's suggestion that the bill be withdrawn, for this session at least.

"It is only too apparent that if the osteopaths succeed the doors must be thrown open to every species of charlatan in the country. If so, let us have medical free trade at once, rather than pretend to establish a standard that can have no claim to being an honest guarantee that a man is qualified to practise medicine.

"It is high time the universities of the province stood together to fight the foe that is threatening the very existence of medicine. The pathetic part of the situation is that the real foes of the medical profession are persons who have been elected by the practitioners of the province to represent them. These are hard words, but they are none the less true. Let us hope that before the Ontario legislature meets again, the good elements in the council (and there are good elements in this body) will come to the fore and adopt common sense methods for dealing with the situation.—*Canadian Medical Association Journal.*

THE PROPOSED ACT

We publish the preceding important pronouncements, because one comes from the President of the

Ontario Medical Association, while the other comes from the official organ of the Canadian Medical Association. We believe the writers of both articles are absolutely opposed to the fallacies involved in osteopathy; but their methods of discussing the subject are vastly different. The one is sensible and logical, the other is querulous and not quite frank.

The editor of the *Journal* has a perfect right to express freely his views as to osteopathy. We feel sure that his opinions in that regard will be endorsed by the great mass of the profession in all the provinces. When, however, he criticizes the acts of members of a body like the Ontario Medical Council he is treading on dangerous ground. Before making comments on such local matters he should be thoroughly informed as to the facts, and his utterances should be fair and judicial. Does the editor think that the following sentences are either wise or correct? "The pathetic part of the situation is that the real foes of the medical profession are persons who have been elected by the practitioners of the province to represent them. These are hard words, but they are none the less true."

The Medical Council and the Legislature.

It is a very simple matter to denounce osteopathy. No "regular" practitioner in Canada, no member of the Ontario Medical Council believes in it, or supports it. Arguments against it addressed to the profession are therefore unnecessary. If the question of licensing osteopaths were left absolutely to the Ontario Medical Council, or any society or body of medical men in Canada, it would probably be settled in about one minute.

Unfortunately the public and the law makers entertain erroneous opinions on the subject. The prejudice against close corporations in the professions is great. Free trade and fair play are advocated. Years ago when homœopathy and eclecticism flourished, many of the most prominent citizens strongly supported them. The majority of the public and the majority of the members in all our Parliaments in Canada believed they should be allowed to exist and also receive due recognition.

While negotiations were going on for the organization of the Ontario Medical Council Drs. Henry Wright, W. T. Aikins and Uzziel Ogden, of Toronto, Dr. John R. Dickson, of Kingston, Dr. John Turquand, of Woodstock, and many other honorable and high-minded physicians decided to make one high standard for all practitioners of medicine, and let the "irregulars" call themselves what they pleased. No one at that time thought the arrangement was altogether satisfactory, and many objected. Within a few years, however, it was generally considered that the results were good.

History appears to be repeating itself in connection with medical politics in Ontario. All the doctors in Parliament, and all the members of the Council are opposed to osteopathy. The majority of the lay members of Parliament, however, backed by a strong feeling from outside, believe the osteopaths should receive some form of recognition.

We are inclined to think there will be some legislation. It would appear that helpful suggestions will assist our legislators more than carping criticism. It is understood in this province, and we hope it will be realized in Montreal that Dr. Jamieson, who intro-

duced the Bill last session, and will probably introduce another next session, is an honorable broad-minded man who will work conscientiously in the interests of both the profession and the public. He may be depended on to do all in his power to prevent dangerous legislation.

The Osteopaths Now in Practice.

One of the greatest difficulties the medical members of the Legislature, and the Committee of the Council, had to meet was the claim of vested rights on the part of osteopaths who have been, and are now, practising in Ontario. We don't see how they have any rights to special legislation in their behalf for favors which would not be granted to Canadian or British graduates or undergraduates in medicine.

We presume that the editor in Montreal has accepted as correct certain street rumors in Toronto that the Ontario Medical Council wished to register all the ten or eleven hundred osteopaths now practising in the Province. The Council did not wish to do anything of the sort. It simply expressed a willingness to accept a small proportion who could show that they had taken certain courses and passed examinations which might be considered satisfactory. It was thought that not more than three per cent. of those now in practice could qualify. We offer this explanation, not because we approve of the Council's action, but because we believe its motives should not be misrepresented.

So far as we understand the question at present we are inclined to agree with Dr. Bruce in his recommendation that all these men should be required to pass an examination before they receive a license to prac-

tise. We note with pleasure the excellent suggestion of the journal that the universities should take some concerted action to prevent injustice being done by any clauses of a new Act which may be considered by the Legislature.

THE INSURANCE ACT IN GREAT BRITAIN

Although it is generally conceded that there are many good features in the new Act, which technically came into force July 15th, the prospects for its success in the near future are far from bright. At the time of writing it is thought that the opposition to its enforcement in many directions is much greater than either its friends or enemies expected.

On the day the Act came into force neither the friendly societies nor the doctors appeared to be satisfied. It is thought by the former that the anticipated benefits will not be so great as expected. It appears that the latter (the doctors) show no signs of submitting to Mr. Lloyd-George's proposals.

It seems from cable reports that the Chancellor has got the better of the doctors in one of his contentions as to the effects on medical incomes. Sir William Plender, the famous Actuary, has investigated the matter, and said in his report that in five great towns last year the gross incomes of medical practitioners averaged five pence per patient less than the sum named in the Act (six shillings).

[NOTE.—It would appear from evidence recently received that the report is not correct in this regard.—*Editor.*]

CANCER STATISTICS

While preventive medicine has done much in various directions, it is very discouraging to find that the proportion of people suffering from cancer is increasing in probably all parts of the world. *The New York Medical Journal* tells us in one of its Edinburgh letters that Sir George Beatson, Surgeon to the Glasgow Cancer Hospital, read a paper on cancer statistics at a recent meeting of the Edinburgh Royal Society. He showed that about four per cent. of the total deaths during the period, 1861 to 1900, were due to cancer. Taking the four decades separately cancer had been on the increase in Scotland, the death rate per 10,000 having been 3.96, 4.7, 5.82 and 7.27 during these periods. The total number of deaths was greater among females than among males. Below the age of 65 females suffered more than males. Above that age the male death rate rapidly overtook that of the female until at the age of 80 it stood at the ratio of 62 male to 58 female. The cause of cancer was still unknown. Many theories had been advanced, but Sir George expressed the opinion that one might as well blame electric cars or picture post cards as adopt some of the theories held.

TORONTO PLAYGROUNDS

The Toronto Playgrounds' Association, which has been in existence for about three years, is doing good work. It now maintains three playgrounds, the "Osler" situated on Argyle Street, opened in 1910, purchased and equipped by Sir Edmund Osler at a

cost of over $25,000; the "McCormick," on Brock Avenue, equipped by Miss McCormick of Toronto and Chicago, opened July 1st, 1911; the "Canada Northern Railway" grounds at the foot of Sumach Street, opened June 1st, 1911. Each of these three grounds is under the supervision of a man and a woman supervisor. The officers are: Sir Edmund Osler, Hon. President; Gordon Osler, President; C. J. Atkinson and Grace T. Walker, Vice-Presidents; Milton B. Hunt, Secretary; George R. Warwick, 401 King St. W., Toronto, Treasurer.

Members of the profession and the general public are invited to visit the grounds, and, if interested in the work, to become "sustaining" members. The annual fee is five dollars and those who are willing to join are requested to send this amount to the Treasurer, Mr. Warwick.

ITEMS

The new sanitarium at Allandale, "Simcoe Hall," was formally opened July 6th. It is under the charge of Dr. William C. Barber, who was in the Ontario Government service for 23 years. It is beautifully situated on a height of land close to the lake, 175 feet above Lake Simcoe and about 800 feet above Lake Ontario.

The 14th Annual Meeting of the American Hospital Association will be held in the Hotel Ponchartrain, Detroit, Mich., on Tuesday, Wednesday, Thursday and Friday, September 24, 25, 26, 27, 1912. Dr. Henry M. Hurd, Secretary, Board of Trustees, Johns Hopkins Hospital, Baltimore, is President, and Dr. J. N. E. Brown, formerly of Toronto, now Superintendent of the Detroit General Hospital, is Secretary of the Association.

The meeting of the Canadian Public Health Association will be held in Toronto, September 16th, 17th and 18th, and an interesting programme will be presented. At the same time the Annual Conference of Medical Officers will be held.

The Association was organized last year and H. R. H. the Duke of Connaught opened the first Congress in Montreal, December 13, 1911. Dr. Charles Hodgetts, of Ottawa, was elected President at the Montreal meeting.

The new wing of the Isolation Hospital, which was under construction about three years, has been completed, and was formally opened July 13th, when the patients were transferred from the old to the new wards. The new wing is intended for diphtheria patients, and has three "observation" wards. For a time, however, while the older portion is being renovated it will contain also scarlet fever patients. It is hoped that when the whole hospital is put in proper shape the danger of "cross-infection" will be greatly minimized, if not entirely avoided. The new wing has cost the city about one hundred thousand dollars, was started when Dr. Sheard was M. H. O., and was constructed under the supervision of the City Architect.

Personals

Sir William Osler expects to visit Toronto in September.

Dr. Herbert A. Bruce, of Toronto, started for England, July 15th.

Dr. Herbert J. Hamilton sailed from Montreal for Liverpool, July 13th.

Dr. Kennedy McIlwraith spent the month of July at his camp on Stoney Lake.

Dr. W. P. Caven, of Toronto, went to his summer residence, Stoney Lake, June 25.

Dr. Sam Johnston and T. B. Macdonald, of Toronto, went to New York July 13.

Dr. Edmund E. King, of Toronto, went to his summer home in Hastings, July 27.

Dr. Gibb Wishart, of Toronto, left for his summer home, Go Home Bay, Georgian Bay, July 13.

Dr. A. B. Ritchie, of Edmonton, after a short visit to Muskoka, sailed for England, July 13.

Professors R. A. Reeve and J. H. Cameron, of Toronto, went to England the last week in June.

Dr. John L. Bray, Registrar, Ontario Medical Council, went to Goderich to spend his holidays, July 16.

Dr. S. M. Hay begs to announce to the medical profession that in future he will limit his practice to surgery and consultations.

Dr. J. N. E. Brown, formerly Superintendent of the Toronto General Hospital, has been appointed Superintendent of the Detroit General Hospital.

Dr. W. A. Kennedy, for some time House Surgeon in the General Hospital, Kingston, has been appointed Lecturer in Pharmacology and Therapeutics at Queen's Medical College.

Dr. J. Orlando Orr on his return trip sailed from Bristol on the Royal George, July 10 and reached Toronto, July 18. He says the greatest advance in the Exhibition this year will be the music and art features.

Professor Whitridge Williams, of Baltimore who is Honorary President of the Glasgow Obstetrical Society delivered an address on pernicious vomiting of pregnancy at a meeting of the society held June 28th.

Book Reviews

Symptoms and Their Interpretation. By JAMES MACKENZIE, M.D., LL.D., Aber. and Edin., Lecturer on Cardiac Research, London Hospital; Physician to the Mount Vernon Hospital; Consulting Physician to the Victoria Hospital, Burnley. Second edition. London: Shaw & Sons, 7 and 8 Fetter Lane, E.C., Printers and Publishers. 1912.

This book is largely taken up with the study of pain and its accompanying nervous phenomena as an aid to diagnosis, and a great deal of its value lies in the fact that the conclusions are based on observations of the writer during a period of over twenty years of general practice. As an aid to the general practitioner such observations, when accurately made and thoughtfully interpreted, are, we believe, of considerable more value than those made by a man whose experience has been gained almost wholly from hospital practice.

The first few chapters deal with general observations on pain, both external and visceral, and the nature of the reflex phenomena associated with it. The affections of the organs of the different systems are then taken up more in detail, and many interesting reflex phenomena discussed. The author acknowledges his indebtedness to the writings of Hilton, Ross, Head and others.

The first edition of this work has been translated into other languages and has met with a prompt appreciation. We bespeak for this second edition a hearty reception by the profession. Many old conceptions of symptoms may be shattered, but in their place we are given newer interpretations which will prove of inestimable value in diagnosis.

Obituary

WILLIAM J. JOHNSTON, M.D.

Dr. W. J. Johnston, of Merrickville, died of pneumonia May 29th. He graduated M.D. from Queen's University, Kingston, in 1891.

T. D. WHITE, M.B.

Dr. T. D. White, formerly of Brantford, died at Nepigon, June 1st. He graduated M.B. from the University of Toronto in 1903. He was a surgeon on the G. T. P. Railway.

WILLIAM LANE, M.D

Dr. W. Lane, of Mallorytown, died at his late residence, June 13th. He graduated from Queen's University in 1875 and soon after settled in Mallorytown where he soon acquired a large practice. He was a member of the Ontario Medical Council from 1898 till the time of his death.

ALFRED PAIN, M.B.

Dr. Alfred Pain, of Hamilton, was one of the unfortunate victims of the Titanic wreck. He graduated M.B. from the University of Toronto in 1910 and acted as House Surgeon in the Hamilton General Hospital for one year. He then went to London where he remained ten months. He started for home on the Titanic.

Selections

Dr. Bell's Heavy Damages against the British Medical Association

The verdict in a suit of unusual interest to the medical profession was delivered on Friday last. The action, which was heard by the Lord Chief Justice and a special jury, was brought by Dr. Robert Bell against Dr. E. F. Bashford and the British Medical Association, claiming damages for libel. The plaintiff, who was formerly physician to a woman's hospital in Glasgow, some years ago removed to London, where he is now in practice. He had formed certain theories as to cancer, as, for instance, that it was essentially a blood disease, and preventable. His experience differs materially from that of the majority of medical men, and Dr. Bashford did not hesitate to attack his bona fides in publishing his professionally unorthodox views and acting on them in practice. In May, 1911, a special number of the *British Medical Journal* dealt with "Quacks and Quackery." Under the heading of "Cancer, Credulity, and Quackery," Dr. Bashford contributed an article therein which spoke in scathing terms of Dr. Bell. He spoke of an article on cancer quacks, written by Sir Spencer Wells in 1857. Passages were quoted from Dr. Bell's book, and the article went on: "It might be inferred from these quotations that Dr. Bell is merely opposed, and it might not necessarily be erroneously so, to accumulated pathological experience and current surgical teaching and practice, were it not for the overwhelming evidence that Dr. Bell, formerly of Glasgow, is the modern representative in London of the practitioners referred to in the extracts quoted by Sir Spencer Wells." The plaintiff was also spoken of as "one of the most advertised cancer curers of the time." There can be no doubt as to the libel thus committed; and, in answer, Dr. Bashford and the British Medical Association pleaded "that in so far as the words complained of consisted of allegations of fact, they consisted of expressions of opinion that were fair comment, made in good faith and without malice, upon facts that were matters of public interest." This amounted to a plea of justification, the most serious step that could be taken in defence of a libel action. By advancing that plea the defendants burnt their boats behind them, and invited heavy damages in case of failure. There is no need to describe the details of the trial. Some half-dozen medical men came forward to say they believed in Dr. Bell's methods, and some had seen good results from it. The Lord Chief Justice, in summing up, said that it would be "a

lamentable thing if any attempt at research to find a cure for this scourge should be checked by unjust criticism and comment." Then, again, he reminded the jury that up to the end of the case it had been attempted to justify the article, and, even in the box, Dr. Bashford still adhered to the opinion that the plaintiff wrote what he did for gain, adding that if that were not the case, he wrote it "through vanity or sheer ignorance." The jury quickly arrived at a verdict for the vindictive sum of £2,000 damages. The result of this trial may well give us pause as a profession, and invites a little candid self-criticism on methods that can permit family linen to be washed in public in so derogatory a fashion. Many of our readers will probably think that such a libel should never have been written by one medical man about another, nor should it have seen the light of day in a leading medical journal. Whatever one may think of the futility, the worthlessness, and the fantastic absurdity of any given plan of medical treatment, there can be little reasonable justification for attributing to its framer unworthy motives. Surely any member of our great profession should be exempt from bitter attacks from other men of his own cloth. The man in the street, on witnessing our family quarrel in the law courts, will at once ask, What alternative theory is presented to us with regard to cancer by Dr. Bashford, as director of the Cancer Research Fund? Now, it must be confessed that, in spite of unlimited resources and years of almost feverish energy on the part of men with training of the highest quality obtainable from modern science, we stand very much as we did before the fund came into existence. In short, Dr. Bell's theory as to the essential nature of cancer can be at present neither proved nor disproved. In the year 1900, before the discovery of the *Spirochæta pallida,* much the same could have been said of syphilis. It has always seemed to us that there was a somewhat undue tendency on the part of the Cancer Research Fund to disregard or depreciate outside work, and we should not be at all surprised to find the great discovery as to the causation or cure of cancer will come ultimately from some comparatively obscure corner of medical activity. In many ways it is a matter of regret that the head of a great scientific organization, of which the medical profession is justly proud, should desert the methods of rigid examination and criticism, and direct against a qualified medical practitioner accusations that cannot be sustained in a law court. In spite of the general high tone and humanity of the medical profession there are times when the bigotry of scientific zeal seems wildly to outrun the plain indications of charity

and of common-sense restraint in dealing with intramural schisms of faith and conduct.—*The Medical Press.*

Medical Treatment of Tuberculous Peritonitis

André Philibert, discussing this subject in *Progrès medical,* states that cod-liver oil is useful in tuberculous peritonitis, provided it is well borne; in many instances, however, especially in the summer, it is not tolerated and must be given up. Repugnance to the use of the oil may often be overcome by beginning with very small doses, then gradually increasing them until five or six tablespoonfuls are taken every morning. The oil is indicated especially when constipation is present. In periods of diarrhœa, however, tannin, particularly combined with iodine in a syrup, is very useful; where tannin preparations are not well borne, tincture of iodine should be given with milk, or, as recommended by Durante, the following solution may be administered by hypodermic injection:

R Iodine .....0.25 gramme;
Potassium iodide .....2.50 grammes;
Guaiacol .....1.25 gramme;
Glycerine (pure, neutral) .....25.00 grammes.

One-quarter, gradually increased to one c.c. is to be injected daily.

The guaiacol is said to prevent pain at the time of injection. For benefit to be produced this treatment must be continued a month or two.

Another useful drug is calcium phosphate, which antagonizes both sweating and diarrhœa, and may be given either in cachets in the form of glycero-phosphates or tricalcium phosphate, or else in solution as monocalcium phosphate.

Arsenicals, such as cacodylates and Fowler's or Pearson's solutions are useful in sluggish, afebrile forms of the disease; in cases with diarrhœa and fever they are contraindicated.

In general, drug medication is, perhaps, preferably to be avoided in tuberculous peritonitis whenever possible, in order to spare the digestive tract. Certain attendant symptoms, however, may require special measures. Thus, pain may require the use of an ice bag, or better, heat or alcohol compresses; rarely of opiates. Mild constipation indicates glycerine or oil enemas, or suppositories. If it proves persistent, it is best to

alternate the enemas with small doses of castor oil, or sometimes of sodium or magnesium sulphate or some laxative mineral water. In the presence of diarrhœa, tricalcium phosphate is valuable. If there are colicky pains in addition, paregoric or other opiates may be given, as flatulence is present or absent. Where obstinate, copious diarrhœa is noted, tannin, krameria, or bismuth are suitable. Tannin and calcium phosphate are both advantageous in that they may be given for long periods without harm. Vomiting should be treated by means of a fluid diet for a few hours, ice internally, and applications of cold to the epigastrium.

Regarding paracentesis in ascites, Philibert states that it has undoubtedly in some cases overcome the tendency to intraperitoneal effusion. An ascites which is only slowly being resorbed may not return after a simple paracentesis, or at least, it may subsequently be only partially reproduced. While persistence of ascites and high tension of the fluid are both indications for evacuation by puncture, they must also be considered as strongly suggesting the performance of laparotomy.—*N. Y. Med. Jour.*

Haematuria in Appendicitis

A. v. Frisch (*Wien. klin. Woch.*) describes from his own observation a series of cases in which hæmaturia occurred as a complication of appendicitis, and briefly comments on 13 cases collected from the literature. Rose and Carless in 1905 were apparently the first to mention that hæmaturia occasionally complicates appendicitis. Of the 13 cases analyzed, bleeding in 6 was caused by the formation of adhesions between the inflamed appendix and the lower part of the ureter; in 3 by implication of the kidney in the inflammatory process; in 2 by the occurrence of a toxic nephritis; while in 2 the cause was unexplained. Two cases, somewhat similar to one another, showed that hæmaturia can be caused by pathological conditions affecting other parts of the intestinal tract. In both of them stagnation of the intestinal contents in the splenic flexure and formation of a fæcal tumor led to hæmaturia from pressure on the left kidney or its vessels. The author next describes 2 cases of his own where the form of hæmaturia was one which has apparently not been previously recognized. The following were in both cases the characteristic signs: (1) Hæmaturia always immediately followed an attack of colic whose

cause lay in the appendix; (2) the condition was temporary and the urine had returned to normal after a few days; (3) the urinary sediment was in both cases made up almost exclusively of blood cylinders, with only a few epithelial cylinders, and a few isolated, much altered blood corpuscles. The author was only once able to make a cystoscopic examination, and could not decide as to whether the bleeding came from both kidneys or only from one. The explanation of this form of hæmaturia is difficult. Simple congestion of the kidney is not known to give rise to bleeding with such a sediment. The facts that the attack quickly subsided, that after it no trace of albumen, no cylinders, or renal epithelium were found in the urine, and that no renal disease developed later all negative the idea of a toxic nephritis. The author's explanation is that the attacks were caused by embolism or thrombosis, since blood cylinders in the urine point to kidney infarct or thrombosis—*B. M. J.*

Treatment of Acute Rheumatism

Dr. Legendre gives good counsel as regards the treatment of acute rheumatism by salicylate of soda. It should be diluted in a large quantity of alkaline water to avoid irritation of the gastric walls. The daily dose should be divided up into equal quantities, given every three hours, night and day, on account of its rapid elimination.

The daily dose for children should be eight grains for each year, and for adults from one to two drachms. The full dose should be continued three days after the fall of the temperature, when it may be gradually diminished up to the twentieth day, when the cure may be usually considered as definite.

Before administering any salicylate preparation the urine should be analyzed for albumin, and the permeability of the kidneys frequently assured in the course of the treatment by the reaction which reveals the regular elimination of the salicylic acid (purple color of the urine revealed by a few drops of perchloride of iron).

The best method of giving the salicylate is to put the full dose into a bottle of Vichy water (Sölestins), to be taken by wineglassfuls in the twenty-four hours. In case of gastric intolerance, external treatment may be substituted for the salicylate of soda.

Salicylic acid, 2 dr.
Ess. of turpentine, 2 dr.
Lanoline, 2 dr.
Axonge, 2 oz.

Where the odor of salicylate of methyl is not objected to, two or three drachms may be poured on a piece of flannel and placed on the painful joint, then a thick layer of cotton wool, and, finally, a covering of impermeable tissue; the application is renewed at the end of twenty-four hours.

The antithermic analgesic action of antipyrin is a rational adjuvant of salicylate of soda in rheumatism. In general the results are very favorable, and frequently, where the salicylate alone fails, the association of these two drugs works wonders.

This association is fully realized by salipyrin, a combination of antipyrin and salicylic acid which is prescribed in the same doses as salicylate of soda.

Salipyrin, 1 dr.
Sulphate of spartein, 2 gr.
Glycerine, 5 dr.
Syrup of orange, 1 oz.
Water, 3 oz.

A tablespoonful every three hours.

Aspirin is, perhaps, more active, but it provokes profuse sweating. It would be well to associate with it a cardiac tone, such as caffein, spartein, or strychnine.

In case of violent acute rheumatism with threatened cardiac localization, a daily subcutaneous injection of ten cubic centimetres of electrargol should be given, or prolonged frictions daily on the outside of the thigh of collargol ointment (15 per cent.) and wet cupping over the pre-cardiac region.

If endopericarditis is declared, the mixture may be modified as follows:—

Sulphate of spartein, 4 gr.
Salicylate of soda, 4 dr.
Old brandy, 1 oz.
Syrup of gum, 1 oz.
Water, 5 oz.

A tablespoonful every four hours, while an intravenous injection of 5 or 10 c.c. of electrargol is given.

When the symptoms of endopericarditis have abated, the treatment is pursued as follows:—

Sulphate of spartein, 10 gr.
Iodite of sodium, 2 dr.
Syrup of orange, 1 oz.
Water, 5 oz.

A dessertspoonful night and morning for ten days, after which:—

Arseniate of soda, 2 gr.
Water, 4 oz.

A teaspoonful night and morning, and paint the precardial region once a day with

Tincture of digitalis, 2 dr.
Tincture of iodine, 3 oz.

Blepharitis.

This common affection is frequently very rebellious and requires methodical treatment; slipshod treatment will but ensure its chronicity.

M. Valude of the Quinze-Vingts adopts the following treatment: To avoid irritation of the eyelids the patient must wear colored glasses (blue or yellow). Locally, frequent bathing of the eyes with

Hyposulphite of soda, 4 dr.
Water, 10 oz.

after which

Red precipitate, 2 grs.
Vaseline, (neutral), 3 drs.

or zinc ointment in case of great itching.

If ointments are ill supported or remain inactive, the lids may be painted with a mild lotion on similar lines.

The yellow stain is easily removed next morning by warm bathing of the parts.

In the moist form of blepharitis, the picric acid may be replaced by a one per cent. solution of sublimate, applied two or three times a day.

The ulcerous blepharitis of children is best treated with yellow oxide of mercury.

Yellow precipitate, 10 grs.
Vaseline, 3 drs.

—*The Medical Press.*

Treatment of Tinea Versicolor

A writer in *Union médicale du Nord-est* gives the following formula for an ointment in tinea versicolor:

R Resorcinol .....
Salicylic acid ..... } of each, 1 to 3 grammes;
Precipitated sulphur .....5 to 15 grammes;
Hydrated wool fat .....
Petrolatum ..... } ....of each, 25 grammes.
Lard .....
M. ft. unguentum.

—*N. Y. Med. Jour.*

Peritoneal Adhesions

Richardson (*Annals of Surgery*) thus summarizes a study on this subject:—

Peritoneal adhesions are of two kinds, those which are useful and those which are harmful and dangerous

It is futile to search for some agent that will banish adhesions from the realm of abdominal surgery, inasmuch as the processes involved in their formation are identical with those involved in peritoneal repair.

In dealing with peritoneal adhesions, the surgeon has recourse to three classes of procedures: (1) measures which prevent their formation; (2) measures which restrict their formation to the harmless variety; (3) measures which aid in their absorption.

Certain anatomical and physiological characteristics of the peritoneum have an important bearing on the problem of peritoneal adhesions; notably its extensive area, its remarkable absorptive power and ability to successfully cope with infection, the variable sensibility of different portions, the continuity of its endothelial surface, the rapidity with which it can form adhesions, and the completeness with which it can later absorb them.

Injury or death of the highly vulnerable surface endothelium is sufficient to set in motion the chain of pathological events which may terminate in dense adhesions.

Etiologically, there are a number and variety of factors involved, but they can all be grouped under the two heads—sepsis and trauma.

An Antidote for the Coffee Habit

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Among its qualities for serious consideration by the medical fraternity are—

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Strict Purity. Unlike the usual able beverages, coffee, tea and cocoa, Instant Postum is pure and free from caffeine and tannin. An item of vast importance in the treatment of nervous diseases.

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Criticism and report of clinical experience are invited.

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As specific prophylactic and curative measures, emphasis should be given to: (1) rigid asepsis; (2) the use of moist hot gauze; (3) careful covering of all raw surfaces; (4) avoiding unnecessary exposure; (5) restricting trauma; (6) gastro-enterotomy and enteroenterostomy; (7) returning the viscera to their proper anatomical relationship; (8) spreading out the omentum over the visceral surfaces before closing the abdomen; (9) careful closure of the peritoneum. A number of additional safeguards are available which have been tested and proved to be of value under certain conditions. The most reliable of these for general use are: (1) viable grafts of omentum or peritoneum; (2) lubricants; (3) judicious ante and post-operative therapy—especially with reference to posture, catharsis, enemeta and length of stay in bed.

The field of specific chemotherapy offers the brightest hope for future progress.

Success in the management of the more aggravated adhesion case depends largely upon accurate clinical diagnosis, followed by intelligent operative procedures.

In properly selected cases, the use of adjacent mesentery for covering raw bowel surfaces offers distinct advantages over all methods hitherto proposed.—*The Therapeutic Gazette.*

Treatment of Hyperidrosis of the Feet and Hands

Sabouraud (*Jour. de Med. et de Chirurgie Prat.*)—For this troublesome condition many methods of treatment have been recommended, but the writer has obtained very satisfactory results from the application of a solution of chromic acid. It may be used in aqueous solutions of a strength of from 1 to 10 per cent. A 2 per cent. solution is most useful, as weaker solutions are not always effectual, while stronger ones tend to cause erythema. The toes, borders, and plantar surfaces of the feet are painted with a tampon of cotton wool dipped in the solution, which is allowed to dry on. This application may at first be repeated daily, but improvement rapidly takes place and then the interval may be progressively lengthened to a week or more. One of the first results is disappearance of the fœtor, the amount of perspiration is greatly reduced, and the small ulcers present in severe cases rapidly heal. The treatment presents no inconveniences, and both slight and severe cases are equally benefitted. In obstinate cases cure may be hastened by the use of the X-rays in the same way as for excessive perspiration of the hands.

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IT TAKES the road immediately (no cranking), and is always ready for an emergency call.
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It is interesting to note that the makers of this car, the Waverley Company of Indianapolis, have had sixteen seasons of electric carriage building, and the 1912 car is the product of the accumulated experience of these years.

See the Waverley at the Garage, Albert Street, or write for particulars.

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TORONTO CANADA

In the latter condition the writer prefers the X-rays to chromic acid because there is excessive moisture without fœtor, and the chromic solution has the disadvantage of producing a yellow staining of the skin, and especially of the nails. The exposure to the rays is carefully regulated so as to produce after 14 days a slight burning sensation unaccompanied by redness or exfoliation. This may be repeated in 3 weeks should the first application prove insufficient. The result is the complete disappearance of the excessive moisture, leaving the hand dry and normal. The writer has not yet observed a case of failure from radiotherapy though in one case in which exposure had been insufficient, recurrence took place after 3 years, but at once yielded to a second exposure to the rays.—*The Medical Review.*

Hæmaturia, when the blood is increased after exercise, and when more abundant in the second portion of the stream than in the first, is always suspicious of stone in the bladder.—*American Journal of Dermatology.*

An overloaded bowel renders a stricture of fine calibre much more difficult of passage by causing congestion. Thus an impassable stricture may easily become passable with the complete evacuation of the bowel contents.—*American Journal of Dermatology.*

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Original Communications

CONSTIPATION

By Helen MacMurchy, M.D., Toronto.

Almost all our patients suffer more or less from constipation. As Sir Lauder Brunton says, "Constipation is one of the troubles that afflict civilized man. It cannot be called a disease; it is really more a natural condition of the bowels, which have not yet been accustomed in the process of evolution to the altered circumstances of life."

The use of the Roentgen Ray to watch the progress of a "bismuth meal" had added somewhat to our knowledge of constipation. Hertz and others have observed by this means that after a meal the stomach is emptied in one to two hours, the small intestine in about four and a half hours, but the residue does not reach the rectum until the end of eighteen hours.

Constipation may possibly be caused by delay in the small intestine, but for practical purposes we may say that constipation is caused by delay in the large intestine.

The lactic acid treatment sometimes cures constipation. Modern surgery has been successful in relieving some very bad cases of constipation.

It is convenient to have definite directions printed or typewritten for patients, concerning—

I. Diet.
II. Daily Exercise and Fresh Air.
III. Drinking Water Between Meals.
IV. Daily Habits.

1. *Diet.*—A mixed diet—"Everything that is going"—is the right one for a grown-up person. But strong tea helps to cause

constipation. At every meal the patient should eat one or more of the following articles of diet, giving them the preference, but taking meat at least once a day:

1. Fruit, especially fresh fruits and those containing small seeds, as figs, strawberries, etc.; grapes, raisins, apples, pears, peaches, raspberries, currants, cherries, prunes, oranges, olives, bananas, grape-fruit, etc. Eating an apple before breakfast is a help.

2. Vegetables, especially those containing some indigestible fibre or other residue, as green vegetables, salads, potatoes, tomatoes, parsnips, onions, celery, carrots, turnips, etc.

3. Honey, syrup, treacle, jam, etc., anything containing sugar.

4. Any food containing common salt, neutral salts of vegetable acids, etc., such as herring, sardines, smoked fish, smoked ham or bacon, and food prepared from fruits, as marmalade, etc.

5. Any food containing fat, as butter, salad-dressing, cream, meat with fat, etc.

6. Whole wheat bread, brown bread, graham bread, gingerbread, digestive biscuits, etc.—any bread containing some of the outside husk of the wheat.

7. Any food containing lactic acid, butyric acid, or other organic acids, such as buttermilk, sour milk, koumiss, kefir, etc.

8. Any food containing a solid residue, as porridge made from oatmeal, cornmeal, cracked wheat, rolled oats, etc.; oatcake and corncake.

9. Legs and wings of fowls, fish with skin, etc.

"Skins and bones,
Strings and stones."

10. Beef-tea, broths, soups, etc.

II. *Daily Exercise and Fresh Air.*—The general health and muscular tone of the body have much to do with the condition of the intestines. Unless the general muscular tone is fairly good, we cannot avoid constipation. The muscles need to have a good tone to protect us from constipation. This applies to all the muscles, even the muscles of respiration. Good breathing exercises help. So the patient must take some suitable exercise daily, such as walking, riding, golfing, skating, bicycling, swinging clubs, fencing, playing tennis, football, basket-ball, etc., and go out in the open air for at least one hour every day.

III. *Drinking Water.*—A drink of hot water before breakfast helps much. A glass of water or lemonade, either hot or cold,

should be taken about an hour or so before each meal, and also before retiring. Few patients drink enough water.

IV. *Daily Habits.*—A regular daily habit of relieving the bowels at a definite hour by the clock is essential. Time must be secured for this purpose, and the patient must not be hurried. On no account allow this to be omitted. The feet should be supported on a low stool. Sometimes adopting the crouching or squatting posture, instead of the sitting posture, while attempting to relieve the bowels will cure constipation. The patient must not strain.

If the patient is really intelligent, and has perseverance, the formation of this habit is possible, with the gratifying result of a complete and permanent cure of the constipation. The patient should go when the clock strikes, and an excellent plan is to go to the bathroom on arising and see to the relief of the bowels before the daily bath. After breakfast is also a good time. Patients who suffer with hæmorrhoids, or with prolapse of the mucous membrane of the uterus, are rather an exception to the above rules. They are often more comfortable if the bowels move just before bedtime, and if the hæmorrhoids are complicated, as they often are, by painful fissure or ulceration of the mucous membrane of the rectum, these distressing conditions must be cured before the constipation can be cured. The regularity, of course, is the important thing; the hour is a matter of convenience, though the early morning is the natural time.

When the patient is "willing to work," so to speak, to get the condition cured, the first thing is to select the time, then *keep to that time every day,* until the habit is established and constipation is cured. For example, the patient takes a bath at 7.15 a.m., and is willing to go to the toilet at 7.00. If the bowels do not move at the proper time that day, it is probably better, if possible, to wait till that time the next day. If the patient, after a fair trial, with the above conditions fulfilled, does not get the required result, the mucous membrane of the intestine has lost the normal habit of responding to the patient's efforts at relief. Then a small enema of pure glycerine will give the required stimulus, and this action, between 7.00 and 7.15 lays the foundation of the habit. Next day the same effort should be made, but a little less glycerine should be used, and a little water added. The enema is not to be used until every effort has been made to do without it. A good physician with a good patient (except in the rare cases where a motion at longer intervals seems to be physiological) can cure any type of constipation except the "cerebral type."

Patience is a virtue, and is necessary in the cure of chronic constipation. And every case must be adequately considered. We are not treating constipation; we are treating a human being. Gentleness and consideration towards the delicate and those approaching the farthest verge of life would guide us to treat such patients in a different way from the average young and middle-aged patient.

Mineral waters are useful. A wine-glass of Hunyadi Janos, Apenta, or other mineral water, diluted with an equal quantity of boiling water, and slowly sipped while dressing in the morning, is often effectual.

Massage of the abdomen facilitates the passage of fluid through the pyloric orifice. Deep massage of the abdomen for ten minutes every day for a month, and then every two or three days for two months is often of service. The simplest way is to roll a big ball, such as a bowling ball, over the abdomen for five or ten minutes before rising in the morning. Of course the services of an expert masseur or masseuse are better.

The "Neptune's Girdle," or local cold water abdominal pack, taken for ten to twenty minutes on retiring for the night may also be tried.

The injection of three or four ounces of olive oil at bedtime, to be retained all night, will often secure a good evacuation the following morning.

Many patients like the following plan: Stew 1½ ounces of senna with 1 pint of water, sugar, and prunes enough for the water to cover. When thoroughly cooked, lift out the prunes, put them in a jar, strain the juice, and pour it over the prunes. Eat two or three prunes, with two or three tablespoonfuls of the juice at breakfast, or after each meal, if necessary. The best prunes, which are sold in bottles, should be used.

Glycerine suppositories or suppositories containing aloin are convenient and satisfactory, and are worth trying before having recourse to enemata or the continued use of laxatives administered by the mouth. A small glycerine injection is often satisfactory.

There are a great many causes of constipation that the patient learns by experience, but often these are not really recognized until the physician points them out. Thus, severe and unwise exertion may be followed by constipation the next day. Again, while some patients need to be persuaded not to eat quite so much, there are probably more, especially among women, who do not eat enough. Tea and toast, with a headache, will give any-

one constipation. A lonely lunch is very apt to be the sort of lunch that invites constipation. The muscular coat of the bowel will not and cannot contract down on nothing. Eat enough.

It should also be remembered that there are some people to whom a motion every two days or every three days is as natural as a daily motion is to others. These poor patients sometimes trouble themselves with pills and potions and powders and nauseous mixtures, not to mention patent medicines, until life is hardly worth living. There are perfectly healthy persons whose bowels move once a week regularly. But they are the exception.

Insufficient sleep is another certain cause of constipation. Go to bed early.

A skilfully made abdominal belt sometimes greatly aids recovery from constipation.

Babies suffer from constipation, too. But that is another story and deserves an article to itself.

TWO CASES OF ANGIONEUROTIC ERUPTION DUE TO ASPIRIN

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Aspirin (acetyl-salicylic acid) has come into common use as an antirheumatic, antipyretic and antineuralgic, owing to its supposed freedom from the unpleasant effects often associated with other preparations of salicylic acid; and while in general, my personal experience with it has been satisfactory, yet, the two cases which I wish to report show that at times unpleasant if not dangerous symptoms may attend its exhibition, even in very moderate doses.

The first case was that of an artist—a lady about 40 years of age. She had suffered from acne rosacea, with slight digestive disturbance and constipation, but otherwise was quite healthy. She has exhibited a peculiar susceptibility to many drugs—such as quinine, atropine, morphine, etc., so much so that I have never prescribed anything for her where it could be avoided. She contracted a mild attack of influenza, with slight fever, malaise and pains. Bearing her drug idiosyncrasy in mind, I prescribed aspirin in unusually small doses—five grs. A short time after taking the first dose, her husband telephoned me that she was very nervous, pulse was rapid and that she felt very weak. Knowing her apprehensiveness with regard to drugs, I attributed the condition to nervousness and told him to repeat the dose in four hours. Following the second dose, the patient's face and lips swelled up with, at the same time, irregular swellings of the type of an angio-neurotic œdema over the extremities. The drug was discontinued and the symptoms disappeared within the next 24 hours.

The second case was that of a lady about thirty-five years of age. She is strong, bright and active, of nervous temperament, the mother of two healthy children. Owing to worries incident to sickness and death in the family, she had developed nervous exhaustion with its attendant insomnia, emotionalism, frontal and occipital headache, and a marked degree of fairly generalized pruritis with some secondary dermatitis. An urticaria factitia could be readily produced.

In consulting me she warned me of her sensitiveness to aspirin. Without her knowledge, however, I prescribed it in 5

gr. doses in association with phenalgin and caffeine. This was promptly followed by the most marked generalized urticarial eruption which I have ever seen. The itching was intense, the lips swollen and the face so swollen as to close the eyes. The cutaneous manifestations were accompanied by marked general depression, nervousness and discomfort. She immediately recognized an effect similar to that of aspirin when taken on previous occasions. The drug was promptly discontinued and the eruption gradually cleared up within a couple of days.

The fact that no mention is made of such toxic effect of aspirin by Stelwagon or Sequeira in their recent text books on dermatology, is evidence that the condition described is not a common one. Periodical literature, however, especially German, contains numerous references. Thus urticarial, scarletiniform and pemphigous-like rashes, swelling of the eyelids, lips, œdema of the skin of the head, face and neck, as well as swelling of the mucous membranes of the throat and mouth have been reported by Hirschberg, Winckelmann, Meyer, Freund, Dockray and others. The results mentioned have frequently followed small doses, 7½ grs. or under, *i.e.*, about one-half or less than the usual maximum dose, although larger quantities, 20 to 30 grs., are not uncommonly prescribed in the Vienna clinics.

Other toxic symptoms as palpitation, delirium, gastric discomfort, dizziness, renal irritation, etc., have also been reported.

The drug has usually been considered so safe and has come into such general use that I have thought it worth while to call attention to the occasional occurrence of disagreeable effects.

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MY PERSONAL EXPERIENCE WITH THE USE OF NITROGEN GAS IN THE TREATMENT OF PULMONARY TUBERCULOSIS*

BY ANGUS M'KINNON, GUELPH.

The first patient in whose case I used the nitrogen gas treatment came under my care in 1899. In March, 1899, I found that he was suffering both from diabetes and tuberculosis affecting the apex of the right lung. He was a man of about 250 lbs. weight, and his cough was terrific. During the summer by diet treatment the diabetes had almost completely disappeared, but the moist crepitus in the upper portion of the right lung was still present. The cough continued still distressing with considerable evening fever, and he was losing weight very considerably. His age was fifty-one. On November 25th, 1900, 135 c.c. of nitrogen gas was thrown into the right pleural cavity by an aspirator needle. Very soon afterwards the cough became greatly relieved, and his evening temperature seldom exceeded 100°. Of course after the gas was injected respiration in the right lung was almost completely abolished, the lung having collapsed under the pressure of the gas.

December 8th a second injection was used; this time 169 c.c. A month later the following note is recorded: He now sleeps almost the whole night without awaking, coughs very little, pulse about 80 and evening temperature seldom over 99°, looks and feels well. On Feb. 25th, April 2nd, June and July 22nd, four more injections of gas were made. On September 30th respiration in the right lung is now fully restored, unable to distinguish any area of crepitation and has almost no cough. In November, pulse 76 to 80, evening temperature rarely over 99°, has gained 15 to 20 lbs. in weight, is eating well and has no cough. The only evidence of his previous trouble found is a small area where respiration is rough behind the second rib of the left side. In 1903, after having been in good health for two years, I find that this patient has a good deal of cough and expectoration. Bacilli again present in the sputum, and an area of fine crepitus behind the second rib. The nitrogen gas treatment was again used and the lung kept collapsed for several months, with very considerable improvement in the patient's general condition.

*Read at the Ontario Medical Association, Toronto, May, 1912.

This patient died in the year 1907, not from his tuberculosis or his diabetes, but from Bright's disease which developed in 1906. In his case the benefit of the treatment was most obvious. Before its use the cough was harassing, preventing his rest at night, and so loud as to disturb any one in the same house. Under the gas treatment the cough promptly ceased with improvement in all the symptoms. This occurred when it was used in 1900 and again in 1903.

Case 2.—C. D., age forty, a spare man, has been suffering for at least two or three years from lung trouble before he came under my observation. In his case the left lung was involved, and the gas was used to collapse the lung from February 18th, 1900, until the first of August. The quantity injected each time varying from 131 c.c. to 206 c.c. In this man's case the results were not so marked. Respiration on the left side was abolished, the cough gradually lessened and the general health considerably improved. In the following December he reported that he had gained 15 lbs. in weight, there was now no cough, evening temperature normal and pulse 78 to 84. A note made in August, 1904, states that he remains quite well. This patient died in July last from recurrence of the disease in the same lung. About ten years were added to his life.

Case 3.—F. H. has had a cough for several years with bacilli in the sputum; he had also a suppurating otitis, and fistula-in-ano. The pulmonary trouble seemed limited to the apex of the right lung, pulse 84, temperature 100 to 101. The lung was kept collapsed from February 8th to the end of April. Although there was some improvement in the cough, yet the general condition failed to respond. He left the hospital and died in Dakota the following October or November.

Case 4.—W. D., age twenty-three, tall and thin. Pulmonary tuberculosis had been diagnosed three months before. In May, 1902, I find his condition thus recorded: "Has hoarseness and occasional attacks of fever, temperature rises from 102° to 103°, but often evening temperature only about 100°, a pulse of 76 to 80, cough annoying, expectoration containing bacilli and a small area of moist crepitus behind the second rib of the left side." This patient's lung was kept collapsed from May 14th until the middle of November, in that time having received six injections, quantities varying from 145 c.c. to 195 c.c. After the first injection the cough very soon ceased, and with it all fever disappeared. Since 1902 I have had an opportunity of examining this patient several times. The chest shows no evidence of the

previous trouble. He appears perfectly well, having no cough. He has regained his health and is able to follow his employment, which I need scarcely tell you is outdoor work.

CASE 5.—Mrs. McL., married woman, age thirty-seven, right apex involved, came under my observation in June, 1903. She had been ill since the previous February. On 22nd June 120 c.c. were injected into the right pleural cavity. For ten days or two weeks there was marked improvement, the cough having abated, temperature being from 98 2-5 to 99 3-5. About a fortnight after the injection the left lung showed marked evidence of disease, which, if present at first, I was unable to recognize. The gas was therefore discontinued, and I think she died from the disease during the same year.

CASE 6.—Miss N. D., age seventeen, with left lung involved, evidence of previous pleurisy, moist crepitus only heard in the left lung. 110 c.c. of gas were injected into the left pleural cavity in 1903. The week after this a serious attack of pleurisy occurred on the right side, which terminated the use of the gas treatment. This patient had been a year (1905) in California, but died two years after her return home.

CASE 7.—M. E., age about forty, single, right lung involved. I was able in this case to collapse only a portion of the lung, owing to adhesions which probably followed a previous attack of pleurisy, on which account the treatment was abandoned.

CASE 8.—In February of this year a young married woman came under my observation, six weeks after the birth of her first child. It was easy to recognize an area of crepitus in the upper lobe of the left lung. The right was free from any trace of disease. Three or four times an injection of gas was made without succeeding in collapsing the whole lung. During the treatment I learned that some years before she had had an acute attack of pleurisy, and no doubt adhesions prevented the treatment having effect in the pleural cavity. In this case the patient received no benefit, and the treatment was abandoned.

The conclusions to which I have arrived relating to the use of nitrogen gas in the treatment of pulmonary tuberculosis, I would simply state in the following few sentences. If the disease is bilateral it cannot be used. If there be complications either from fistula or intestinal disease, or middle-ear disease it is not likely that it will accomplish much for the patient. I do think, however, in any case early diagnosed where there has been no pleurisy, and where it is limited to a portion of the lung, if sufficient gas be injected into the pleural cavity to cause total collapse of

the lung, immense advantage to the patient will be gained. The cough will disappear within one week, night sweats will cease, the patient will obtain refreshing sleep. He usually improves in weight and appetite so that in a few months his health seems to be fully re-established. I never found it necessary to continue the use of the gas more than six months. After that I allowed the lung to acquire its ordinary function in respiration. In behalf of the nitrogen gas treatment, there are several claims I may briefly mention.

In the first place it is carrying out with regard to pulmonary tuberculosis, the same treatment we apply to tuberculosis of joints, viz., absolute rest. By collapsing the lung it ceases to expand and contract in the act of respiration, and there is thus given an opportunity for any cavity that may have formed to heal. Again this treatment does not in any way interfere in the carrying out of any other measure that is indicated or thought advisable in the management of the case.

One great thing that it does accomplish when a lung can be collapsed, is an immediate control of the harassing cough. When successful the cough ceases within twenty-four hours, and with it the night sweats and the fever that in some cases occur even in early stages.

Lastly, I am not claiming that this measure will cure even where it succeeds in controlling the cough. Of all the cases in which I used it, only one is living and well now. One of the others lived eight years, and died of another disease, and one died from tuberculosis of the same lung, eleven years after the use of the gas, when in a condition that would not lead one to expect him to live more than one year. We know well that results equally good are reached occasionally by the ordinary methods of treating the disease.

About sixteen years ago a lad then fourteen years of age, had the whole lower lobe of his left lung a mass of crepitation. The expectoration contained bacilli, the cough was harassing and accompanied by evening temperature up often to 102 or 103. In this boy's case no special treatment was used. He was kept out doors at light employment, could eat well, and after a duration of two and a half to three years his health greatly improved. The cough gradually ceased, his weight gained and that improvement has become permanent. He was not allowed to return to any indoor occupation. He is now over 30 years of age, married and perfectly well, and in the active management of a large lumbering business in British Columbia.

Each one of us could refer to numerous instances of like character, but I claim this for the nitrogen gas treatment that no method gives such quick control of the harassing cough, or is capable of such rapid improvement in the ordinary symptoms of the disease. I therefore think that no mistake will be made in resorting to its use in early stages of the disease, under the conditions to which I referred.

In the remarks I have just now made with regard to the nitrogen gas treatment, I have not forgotten that my experience has been limited to a few cases only, and that consequently the conclusions to which I have arrived are not entitled to the same weight, as if the treatment had been used in a large number of cases.

A MEDICAL COMMISSION

JOHN HUNTER, M.B., TORONTO.

This year has seen the auspicious solution of the difficult problems involved in securing the legislative act that gives to every legally qualified physician in any Province the privilege of following his vocation anywhere throughout the Dominion. Dr. Roddick and all who have helped bring about "Dominion Registration" have placed the medical profession of Canada under a deep debt of gratitude to them for the splendid work they have done. The future medical historian will find in the broad outlook that inspired these men, in the dauntless courage displayed in the face of apparently insuperable difficulties, and in the inexhaustible patience with which each protracted delay was met, much that ought to challenge the attention and the respect of the generations of medical men yet unborn. The graduates in medicine of to-day, and of all the years to come, can cast their eyes over all the Provinces, interspersed between ocean and ocean, and far-flung from the international boundary to the northern limits of civilization, and find no legal barriers circumscribing their choice of location.

The establishment of "Dominion Registration" is an epoch-making event in our medical history. There are two previous historic epochs: 1st, the arrival in Canada, after the conquest, of the "army surgeon," and of a number of highly cultured British physicians, and also of a few eminent men from the United States. All of these rendered valuable service, not only to their patients, but also in establishing a high standard of medical practice and of medical ethics. They both merited, and received, the respect of the public. 2nd. The establishment in the "sixties, seventies and eighties" of the past century of the different Provincial Medical Councils. In the interval between these epochs both medical teaching and practice lapsed into undesirable conditions. The medical schools were "close corporations," with a pecuniary interest in the number of students each could enroll. The standards of matriculation and of graduation were not always conducive to the acquisition, and to the maintenance, of a high literary and scientific status in medicine. It is true that the example and the work of individual teachers were a splendid inspiration to the better class of students, but the conditions existing during this period did not always prevent the ignorant, indo-

lent, and unscrupulous students finding their way into the ranks of the general practitioner. The examinations and the rules and regulations established by the Medical Councils did good service in helping to raise the standard of medical education, and in keeping the "ranks" free from ignorant and rapacious charlatans. Unfortunately, during the past decade or two, the conduct of some of the members was not above reproach, so that the "passing" of the Medical Council will not prove an unwelcome event to the profession at large.

A new stage has been reached. The days of the "army surgeon" and of the pioneer physician have been relegated to the pages of a somewhat ancient history. The Provincial Medical Council has filled, with more or less success, its mission, and we now pass under the regime of a Dominion Medical Council. Every physician in Canada should ask the question, "What services can I render under these new conditions?" There is no delusion more detrimental than an unbelief in individual responsibility for professional, social or national well-being. It is the character of the service the individual members of a vocation render that makes it a power for either good or evil. Perhaps the last sentence or two may remind the reader of the incident related in the life of a dissolute character in one of our large cities. Wandering about the streets one stormy wintry night, ragged and hungry, she was attracted by the lights into one church after another. On leaving the third church without anyone having offered to furnish her with either clothing or food, she threw up her hands and exclaimed, "Preaching, preaching, nothing but preaching every damned place I go." These are the words of the gutter, but do they not teach us that a good exhortation cannot always take the place of a good act. Professional life, like that in any other vocation, has its imperative needs that can be met better in action than in words. The people and the medical profession in Canada need the assistance of a "Medical Commission," with duties and powers somewhat analagous to those of a tariff commission. The question may be asked: What would such a commission find to do? A brief, but very imperfect summary of its work may be outlined.

1. The many problems—national, provincial, municipal, social, and domestic—calling for a solution. The exclusion of the undesirables—physical or moral—who may try to gain an entrance at our seaports. The action to be taken to prevent the pollution of rivers and lakes. The prevention of such infectious diseases as tuberculosis, smallpox, etc., becoming a menace to the health of the people. Aid in framing rules and regulations

for the rational and scientific management of all contagious and infectious diseases, by municipal and provincial health officers. Ascertain from the history of the great nations, both of the past and of the present, what effects the influx of a large foreign element have produced on the native races. The solution of all of these and similar complex problems falls most naturally into the realm of medical science. The whole civilized world is beginning to recognize that the health and the mental and moral vigor of the people are a nation's best assets. The Dominion Government could not do the people of Canada a greater service than by the appointment of a competent Medical Commission to thoroughly investigate and report on all the conditions that are a menace to the physical and moral well-being of our people. The damage that earthquakes, floods and fire may do in the physical world can often be made up again, but the loss of life, and many forms of disability caused by disease that efficient laws and regulations could have prevented are irreparable. The loss of life and of property through such great physical perturbances as an earthquake or a cyclone, are always tragic and lamentable, but death or disability from causes that are preventable is always criminal, either on the part of the individual, of the municipality, or of the nation. The intelligence and experience of its physicians are most valuable assets in national life. Why, then, should not the Government appoint, and finance, a Medical Commission that could give the nation the full benefit of all that medical science and experience are both able and willing to give.

The work of a Medical Commission would not only be of inestimable service in solving, removing or mitigating many conditions that are a menace to both the physical and moral well-being of the people, but it could also do much in the direct interest of physicians themselves. The problems involved in acquiring a higher standard in medicine, both in regard to literary as well as in scientific attainments. It should be asked to furnish a rational and practical code of ethics to govern the conduct of physicians in dealing with each other, and with the public. It should be able to aid in the procuring of legislative acts, rules and regulations that would keep the ranks of reputable medicine free from contamination by ignorant, unscrupulous and rapacious charlatans. It could be of service in ascertaining what would constitute an equitable tariff of fees, and in this way help to eliminate from medical practice the conditions that beget and perpetuate the disreputable squabbles incident to so-called fee-splitting. It could also be made the final "court of appeal" in all disputes arising between medical men themselves.

Selected Articles.

THE TREATMENT OF SYPHILIS*

By D'Arcy Power, F.R.C.S.,
Surgeon St. Bartholomew's Hospital, etc., etc.

The modern treatment of syphilis dates from the years 1905-1909. In 1905 Schaudinn discovered the spirochæte; in 1907 Wassermann published his test; in 1909 Ehrlich issued his remedy, "606." It is necessary to remember these dates, for they show how recent is our knowledge and how tentative must be the results in a disease which has such long-continued and far-reaching results as syphilis.

The first advance towards a scientific method of treating syphilis was made when Schaudinn discovered the spirochæte and brought the disease into line with other diseases of microbic origin. The second step in the treatment of syphilis was also purely scientific. It was made when Wassermann gave a test founded upon the broad principles of pathology. At first, I fear that I was somewhat sceptical as to the value of the Wassermann reaction, and exactly in those cases where I now know that it is of the very greatest help. It was difficult to believe that a young man, seemingly in perfect health and without a blemish, was suffering from a spirochæte infection simply on a pathological report. I had been brought up in the old school which required some clinical evidence of syphilis before a patient is placed upon a mercurial course. I knew and had taught for years that syphilis was a deceitful disease, the signs and symptoms being intermittent, because periods of apparently perfect health are intercollated with other periods when the manifestations are plain, but it was difficult to rely upon a test made by another person, however skilful and assured he might be. Two or three cases, however, convinced me. In these cases the absence of symptoms, with a doubtful history of a sore, led me to give too sanguine a prognosis, and decided me to await further evidence, although the Wassermann reaction was positive. Mercury had to be given in each of these cases, and I now have faith in Wassermann's test, especially in the difficult cases where it is necessary to obtain evi-

*Delivered before the Royal Society of Medicine, June 10, 1912.

dence of syphilis apart from the ordinary clinical signs. We must recognize, however, that the test has its limitations. The reaction is not given by every patient even when there are obvious signs of syphilis. It is not usually positive until five to eight weeks after infection, when the disease has ceased to be local and has become generalized in the body. It is positive in 95 per cent. of cases of "secondary" syphilis and in 75 per cent of "tertiary" syphilis, whilst it is said to be positive in only 50 per cent. when the disease is latent. Moreover, it labors under the disadvantage of being a laboratory test requiring a skilled worker to carry out the technique. In the future this may be overcome in one or two ways—either the test will be simplified or we shall educate the next generation to become more skilled pathologists than we are ourselves. For the present it is necessary to rely upon the report of another person, and this is somewhat repugnant to my surgical instinct.

Knowing the cause, and being provided with a test, it is possible to employ a course of rational treatment in a disease, and this is what has happened in the case of syphilis within the last few years. Mercury even in our own times was administered in all cases of venereal disease associated with a sore. The more cautious, indeed, awaited the appearance of "secondary" symptoms; the bolder gave mercury at once if there was a "hard sore" or "Hunterian chancre." But the drug was given for the most part without any system and without any very clear idea of what was to be expected from its use. Too often it was given merely for the relief of syphilitic manifestations, and its administration was stopped as soon as these signs disappeared. Little was known of visceral syphilis; still less of syphilis of the nervous system. It is no wonder, therefore, that syphilis was looked upon as incurable, and it actually was so when mercury was given in this haphazard fashion. The remedy further fell somewhat into disrepute because it was recognized that many syphilitic manifestations disappeared spontaneously whether or not mercury was given. A school arose, therefore, which maintained that guaiacum, iodide of potassium, arsenic, and other drugs were just as efficacious. It was difficult to gainsay these statements so long as the cause of the disease was unknown and there was a prevailing ignorance of its natural history. We know now that all these drugs may be useful adjuvants, but that they do not cure—that is to say, they do not destroy the causal micro-organism in the same thorough manner as is done by mercury.

In this country the rational administration of mercury with a view to cure syphilis, and not merely to relieve the signs of

syphilis, is due largely to the teaching and practice of Sir Jonathan Hutchinson. We have learnt from him that small doses of the less irritating forms of mercury administered for long periods of time, whether or not signs are present, are more serviceable than large doses given irregularly and for short periods. But as the cause of syphilis was unknown, Sir Jonathan had only his own acumen and experience to guide him, and it was impossible for him to communicate his knowledge personally to any very large number of medical men. His methods, however, came into general use, and even before the discovery of the spirochæte it was admitted that syphilis was curable by those who were prepared to take an infinitude of time and trouble about their disease. There was, however, no test upon which reliance could be placed as to whether or not a patient was cured, and the answer to the question had to depend upon time and circumstances. It was impossible, therefore, to lay down any definite rule as to the duration of a mercurial course, or when it might safely be stopped. The length of a course was dependent upon the presence or absence of symptoms after the administration of mercury had been stopped for a longer or shorter period. It resolved itself eventually into the administration of mercury with regulated intervals for about two years. If at the end of this period no fresh symptoms appeared within the next three months the patient was thought to be cured. It is needless to say that this empirical method often led to disappointment, and sometimes to disaster. It became clear, too, as our physicians learnt to associate some of the commoner diseases of the brain and spinal cord with imperfectly treated syphilis, that very many cases of the disease were never really cured, although there had been no external signs for many years after treatment had been discontinued. The Wassermann reaction seems to give us the necessary clue to the process of cure; and syphilis can only be said to be cured, in the light of our present knowledge, when the test is negative and the patient remains without symptoms for at least a year after the use of mercury has been discontinued.

The first variation from the methodical and routine administration of mercury by the mouth or by inunction was the use of intramuscular injections. Experience soon taught that it was especially serviceable in those terrible forms to which the term "malignant syphilis" is applied, when mercury was not well tolerated by the digestive tract, and when the patient could not be trusted to follow out his orders. The method of intramuscular

injection was reduced to a system by the late Colonel F. J. Lambkin, A.M.S., whose recent untimely death in South Africa we all deplore. The creams of calomel and metallic mercury which he invented give excellent results. Less pain attends their use than when other formulæ are employed, and in no case in my own wards was their administration followed by troublesome symptoms when care was taken to avoid the nerves and blood-vessels of the part where the injections were made. We learnt that it was better to have the creams dispensed in single doses, each in an hermetically sealed tube, rather than to fill the syringe from a larger supply which had been repeatedly heated to render it fluid. It was necessary, also, to sterilize the syringe by boiling it in olive oil immediately before use. The cream and the oil then mix readily, whereas bubbles are formed when the cream is drawn up into a syringe which has been boiled in water. The routine treatment was identical with that recommended by Colonel Lambkin, viz:

1. Four injections of calomel cream delivered deeply into the gluteal region. Each injection consists of 10 minims of cream, the dose containing 1-4 gr. of calomel. The cream is made according to the formula:

℞ Calomel ..... 5 grm.
Creosote
Camphoric acid ..... āā 20 c.c.
Palmitin basis ..... 100 c.c.

2. The injections are made at intervals of a week, and at the end of a month they are replaced by a cream containing 1 gr. of metallic mercury in every 10 minims. The composition of this mercurial cream is:

℞ Metallic mercury ..... 10 grm.
Creosote
Camphoric acid ..... āā 20 c.c.
Palmitin basis ..... 100 c.c.

Two weekly injections of this metallic mercurial cream are given.

3. No injections are given for two months after these six doses have been administered.

4. An injection of metallic mercurial cream is then given every fortnight for two months—*i.e.*, four injections.

5. No injections are given for four months.

6. An injection of metallic mercurial cream is given every fortnight for two months—*i.e.*, four injections.

7. No injections for six months.

8. An injection of metallic mercurial cream is given every fortnight for two months—*i.e.*, four injections.

9. No injections for one month.

10. An injection of metallic mercurial cream every fortnight for two months.

Colonel Lambkin's method marks a distinct advance in the treatment of syphilis. He regarded mercury as a curative agent, and gave it systematically to that end. It is well adapted for the Army and Navy, and it can be employed advantageously in hospital practice if the patient can be interested in his cure and will attend once a week for the injection. It is less fitted for private practice, where the mere mention of a needle prick is often sufficient to frighten a patient, whilst the needle itself is necessarily longer and stouter than that of a hypodermic syringe. Unskilful technique, too, has caused hæmatomata, painful indurations, and, occasionally, deep-seated abscesses. The knowledge that such accidents have happened has also had some effect in limiting the more extensive use of a valuable method.

In private practice, therefore, when a patient has declined to be treated by intramuscular injection, and recourse has been had to perchloride of mercury and iodide of potassium, I have tried to make the mixture somewhat less nauseous than that usually prescribed.

I cannot speak from personal experience of the value of the arylarsonates and soamin. The accounts of these remedies did not appear to be very satisfactory, and before I had made up my mind to employ them they had been replaced by "606."

"606," or salvarsan, has been extensively employed in my wards, and I think highly of it as a remedy for syphilitic manifestations, although we have not yet sufficient evidence to prove that it cures the disease. I have always used it, therefore, as an adjuvant to mercury and never by itself or in place of mercury. The present working hypotheses are that salvarsan kills adult and free spirochætes, whilst it has but little effect upon those which do not lie in close relation with the blood and lymph paths, upon the immature forms, or upon those which are in an intracellular stage. Whether or not we choose to employ one of these hypotheses, two great facts stand out in connection with the action of salvarsan in syphilis—it cures the symptoms of syphilis in a shorter time than mercury, and it can be employed as a test for syphilis, because in many cases when salvarsan is given to a syphilitic patient whose Wassermann test is negative, the first effect of the injection is to render the reaction positive, although

in a short time it again becomes negative. Salvarsan promises, therefore, to be useful as a test for the cure of syphilis effected by other means.

The net outcome of our experience with salvarsan has been that it serves as an excellent adjuvant to mercury in the treatment of syphilitic lesions. It has proved especially useful in cases of chronic superficial glossitis, in active syphilitic periostitis, and in ulcerating syphilides of the skin. It has been less serviceable in cranio-tabes, and in cases of osteitis associated with the formation of sequestra, because in these conditions the pyogenic organisms are more important than the syphilitic infection; neither have the results been very satisfactory in cases of syphilitic arthritis, doubtless because many of these inflammations are also associated with a tuberculous infection.

So far as we have been able to ascertain, no serious accident has occurred in our cases. We have recognized that we were dealing with a powerful arsenical compound, and we have endeavored to eliminate the more obvious risks. Personally, I have not hesitated to use it in private when the patient desired it, and in one case of parasyphilis I administered it—against my own wish, but at the earnest desire of the patient himself—to a gentleman who had suffered for many years from tabes. He had a definite Wassermann reaction, he was nearly blind, and he was unable to walk more than a short distance. I assured him that there was very little probability, on pathological grounds, of his obtaining any good from salvarsan, and that he might be made worse. He decided, however, to take all risks, and felt so much relief from the first injection that he determined to have a second. The first injection was given on July 5, 1911; the second on October 4—0.5 grm. each time. This patient seems on the whole to have received benefit from salvarsan, and it will be interesting to discover from similar cases how far this was due to the drug and to what extent it was the result of a firm belief in its efficacy. The positive Wassermann proves that the spirochæte infection was still active, though it was many years since he contracted the disease. The results seem to show that—as might have been predicted—his cerebral functions have improved whilst his spinal system remains unaltered.

The routine of our technique for administering salvarsan has always been the same. It has been given by intravenous injection, and the patient has been kept in bed for twelve or fourteen hours previously. The skin has been prepared by sterilizing it with a 2 1-2 per cent. solution of iodine in rectified spirit. The veins are

rendered prominent by the application of a fillet, and when the veins at the bend of the elbow have been used the patient has been made to grasp a ruler or a staff, as in the days of blood-letting. The needle used is that recommended by Mr. J. E. R. McDonagh, which is bevelled to a point on the upper surface instead of beneath, as is usual, and it is provided with a slightly concave plate of metal to allow it to rest more securely on the skin—two small modifications which make the operation of puncture of the vein much easier. It is unnecessary to give either a local or a general anæsthetic when the veins can be made prominent, as is usually the case. A skin incision is unnecessary, and with a well-directed and sharp needle the pain is momentary and infinitesimal. The syringe and needle are filled with freshly prepared and sterilized salt solution, and the vein is punctured obliquely upwards. The fillet is then relaxed and the contents of the syringe are emptied into the vein. This will show whether the vein has been fairly entered, for if it has been missed or transfixed the salt solution will form a bulla owing to the extravasation of fluid into the surrounding tissues. If the salt solution enters the vein freely the syringe is filled with salvarsan solution, which is then injected by syringefuls at a time until the whole pint has been introduced. When all the salvarsan solution has been introduced a syringeful of salt solution is injected to wash out the needle and to free the tissues from any salvarsan which might be adherent to them. Both the salvarsan and the salt solution are kept at a temperature of 105° F. The needle is then withdrawn, a pad and bandage are applied over the prick, the arm is kept in a sling for a few hours, and the patient is allowed to get up when he feels inclined to do so. The salvarsan solution is made by dissolving 0.6 grm. of salvarsan in a pint of sterilized salt solution made from freshly prepared distilled water. The solution is neutralized or rendered faintly alkaline by the addition of a 1 per cent. solution of sodium hydrate. It is necessary to have everything sterile, and it adds greatly to the ease of the operation if the rubber junctions connected with the three-way tap of the syringe are made of such thick rubber with so small a bore as to make it difficult to fit it on to the tap, because the ordinary thin rubber tubing is apt to slip off or become flattened if it kinks whilst suction is being made. When the needle is once fairly introduced care must be taken that it does not slip out of the vein. It is therefore handed over to the sole care of the patient, if he is competent to look after it; or, if he is nervous, it must be given in charge of a nurse. If the needle slips out, or if the vein

is not punctured fairly at the beginning of the operation, it is much better to employ another vein rather than to attempt any rectification in the one first chosen.

Our chief difficulties have been to find a suitable vein. Many of the men have been so self-indulgent as to become fat with lax tissues, whilst in women it is by no means easy to make the veins of the arm prominent. In some cases we have used the internal saphenous; in others it has been necessary to give a general anæsthetic and dissect out the vein at leisure.

The sequelæ have been trivial—headache, a rise of temperature to 103° to 104° F., with or without a rigor, vomiting, diarrhœa and stomach ache, but they have caused no anxiety, and the patient has always been well on the following day. In the majority of cases the patients felt no inconvenience at all. Two bad results have come under my observation, and in both an intramuscular injection of salvarsan had been made. In one case there was extensive sloughing of the tissues at the seat of the injection; in the other an œdematous and painful swelling occurred just below the angle of the left scapula where salvarsan had been injected. The swelling suppurated, was laid open, and in due course healed; but it was a long time before the œdema disappeared.

It seems, therefore, that salvarsan is a useful remedy if its limitations be recognized. How far it is useful in the initial stage of syphilis I do not know from personal experience. It is said that primary sores heal much more quickly if salvarsan is given than if it is not given, but the glands which enlarge as the result of the infection remain harder than normal, although they have returned to their natural size. The drug is very useful in the secondary and tertiary stages in those cases where the lesions are due more to syphilis than to pyogenic micro-organisms. It is serviceable, too, in some cases of parasyphilis, but to what extent and under what conditions I am again ignorant from want of personal experience. We still need more information about the treatment of heredo-syphilis with salvarsan, whether it is best to treat the child through the mother, by means of an intermediary, as a goat or cow, or directly—*i.e.*, the child itself.

Broadly, I do not think that syphilitic lesions are more completely cured by salvarsan than they are by mercury, but the result is certainly brought about more speedily; and as the administration of salvarsan does not prevent the simultaneous employment of mercury, the two remedies may be serviceably used together. But until we have much more evidence and have proved

its efficacy in a very large number of cases for a period of several years we shall not be justified in saying that salvarsan cures syphilis.

It is necessary to ask, What are the contra-indications for the use of salvarsan? About twenty-three fatal cases have been recorded, but several of these were moribund at the time of administration, some were associated with a faulty technique, and in others it was clear that the drug should not have been employed. It seems from the evidence at present available that the intravenous injection of salvarsan is a safe method of procedure if care be taken to administer it in a rational manner and to reasonably healthy persons. The further question, then, arises, At what period in syphilis should salvarsan be given? The working hypothesis is, That the drug destroys the active spirochætes with which it is brought into contact. If this hypothesis is correct the sooner a dose is given after infection the more likely it will be to answer its purpose, for we must assume that the microbes are localized at first to the seat of inoculation and to the neighboring lymphatics and glands.

What is the best treatment for syphilis in the present state of our knowledge of the disease? Taking, for the sake of example, the case of a surgeon or of a nurse who is inoculated in the course of professional duty, the wound should be well washed under running water, like a wound obtained in the post-mortem room. It should then be dried and covered with an ointment consisting of 10 grm. of calomel in 30 grm. of lanoline. This mercurial ointment should be gently rubbed into the wound for five minutes and a dose of salvarsan (0.6 grm.) should be given intravenously. The prophylactic action of the mercurial ointment appears to end—at any rate experimentally—within twenty-four hours of inoculation; the salvarsan is said to be serviceable in checking the generalization of the disease even when the seat of inoculation has become characteristically indurated and the lymphatic glands are enlarged. The fact, however, that the lymphatic glands do not return wholly to their natural condition after the administration of salvarsan in early syphilis rather inclines me to distrust the drug as a sole remedy, and should lead one to give mercury in some form or another as soon as possible.

A Wassermann test should be made at an early period after inoculation, although it will probably be negative in the very earliest stages, for, as has been stated already, our present knowledge shows that it is usually positive in five to eight weeks after infection.—*The Medical Press.*

THE PROPER DOSAGE OF AIR, FOOD AND REST IN PULMONARY TUBERCULOSIS

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I feel as if I owe this society an apology for bringing before it a subject so threadbare as the treatment of pulmonary tuberculosis by fresh air, good food and regulated exercise. It seems wise, however, to examine from time to time in the light of our progress even the most widely accepted and most revered medical precepts. "Hospitalization" for the attending physician, the interne and the nurse, and "routine treatment" for the private practitioner, offer paths easy but dangerous alike to him who prescribes and to him who follows. Nowhere is this better exemplified than in the treatment of pulmonary tuberculosis.

The last half of the 19th century saw the institution of the fresh air treatment of pulmonary tuberculosis, which in the first decade of this century has been extended to the treatment of many other diseases, including nervous and mental disorders, pneumonia and certain digestive disturbances. We know fresh air greatly benefits pulmonary tuberculosis, but even yet some of us have not fully realized that fresh air benefits other forms of tuberculosis as much as it does the respiratory type. It is then safe to say that fresh air exerts no more influence upon the lungs than upon the rest of the body. A further fact bearing upon this point is the unpleasant symptoms that many persons experience when confined in a close or stuffy atmosphere and forced to breathe "ruminated" air. It is almost needless to enumerate these symptoms, at first headache, drowsiness, lassitude, malaise, nausea, faintness, vertigo; later digestive and nervous disturbances, followed by malnutrition, secondary anæmia and lessened resistance to infectious diseases. It is of considerable interest to recall the symptoms of mountain sickness experienced in very high altitudes (15,000 feet)—headache, intense drowsiness, lassitude, nausea or even vomiting, fainting, vertigo and further palpitation of the heart, throbbing of the arteries and shortness of breath.

Putting two and two together, it would seem very reasonable to infer that lack of oxygen in the latter case was the cause of the disturbance, and arguing by analogy it would appear most probable that lack of oxygen was the disturbing factor in the former.

Such certainly was long a current belief. The increased percentage of the CO_2 has been held by some to be the chief cause, while others have believed that "crowd-poison" was the essential factor. The existence of "crowd-poison" has been questioned, but Rosenau and Amos have proved beyond doubt, by the anaphylactic reaction, the presence of protein bodies in the exhaled air.

Are these then the deleterious substances that weaken resistance to and lessen chances of recovery from pulmonary tuberculosis when the patient fails to get fresh air? Ingenious experiments have been devised to help answer this question. Several healthy men have been confined in small cabinets and made to rebreathe a small amount of air. The percentage of oxygen quickly fell and that of CO_2 rose greatly. The organic matter, which apparently bears some relation to the percentage of CO_2, must also have arisen. The individuals all became very uncomfortable and finally ceased to talk. An electric fan inside the cabinet was then set in motion and great relief was experienced even though the composition of the air remained unaltered. In another experiment the individual within the cabinet was allowed to breathe fresh air without, however, experiencing any relief. Still again, a person outside the cabinet was permitted to breathe only the air within the cabinet and suffered no ill effects. These and other careful observations have led to the conclusions that coolness, dryness and active motion of the air are factors to be sought after, and further, as James puts it, that "many atmospheres are good enough to be breathed which are not good enough to be lived in."

The temperature of the air plays an important role in health and disease. Recent inquiries concerning certain mill operatives in Connecticut have shown that men working upon piece work accomplished more when there was a marked change in the atmospheric temperature even from cooler to warmer conditions. As a rule the more vigorous races live in climates where the cold, though pronounced, is not severe enough to limit the production of good crops. The custom of sending young and vigorous patients to climate with equable temperature has long since been abandoned. An average diurnal variation of at least 20 degrees F. is one requisite of a good health resort for tuberculous patients. Sudden changes for vigorous patients act like a tonic and are to be desired when intelligently met. This is a feature of the winter climate in Arizona, where a marked change occurs each night at sunset. The weight curve of healthy and tuberculous individuals bears this out. In 1,200 patients at the Adirondack Cottage Sanitarium I found the weight began to increase in Aug-

ust and continued to do so until Christmas. It then remained stationary or decreased slightly to Easter, when it fell steadily to August. A marked change of temperature is usually noticed in the Adirondacks in August and early September and the diurnal variations are great. I might add that this is probably the normal weight curve. Nearly every tuberculous patient has a more or less deranged nervous system. Like cold tubs in typhoid, cold air in pulmonary tuberculosis is a great nervous sedative, for it abstracts heat, especially when in motion. Too intense or too prolonged cold, however, over-stimulates some. It has long been a current belief in Saranac Lake that one hour of driving was worth two of sitting on the porch. Who can say that, beside the psychic influence, the rapid change of air about the body may not be greatly beneficial? Unquestionably the exhilaration of coasting and of automobiling may in part at least be explained in this way. In any case, too active motion of the air with the attendant evaporation of moisture from the surfaces of the body, is to be ascribed much of the sensation of well being experienced from good ventilation. It requires only slight movement of the air to increase markedly the loss of heat from the body. In cold climates this must be met by heat-production, by muscular contractions, which when the patient is at rest are involuntary but greatly raise the muscular tone.

The dryness of the atmosphere, that is, the degree of humidity relative and absolute, plays an important part, but can be largely offset by motion of the atmosphere. Mere dryness is of little avail, for nearly every home in America, especially in winter, has an atmosphere containing far too little moisture—in fact, far less than is to be found in the deserts of Egypt or Arizona. The really important point is the amount of moisture that can be absorbed by the atmosphere from the surface of our bodies, and this depends upon the humidity of the air, its temperature and, most of all, upon the movement.

This brings us to the consideration of a few practical points in the fresh air treatment of pulmonary tuberculosis. It might seem wholly insufficient, from what I have said, for a patient to be in bed with his head out of a window. In reality it is not so; but in my opinion it is far less effective than the full air bath. Spraying the upper part of the trunk with cold water in typhoid fever is certainly not as efficient as a complete sponge, but does some good. So with the window tent. It must not be lost sight of, however, that the room in which the body remains needs very careful ventilation.

A question that must be decided frequently is, whether the roof or the back yard is the best place in which to take the fresh air treatment. I do not hesitate to say that the roof should be used in every instance, where possible, for several important reasons. The number of bacteria, the quantity of dust and the temperature of the air, decrease directly with the elevation above the street, while the movement of the air increases. This leads to fewer secondary infections and to less irritations of the respiratory tract, and subjects the body to a far better hygienic environment. In summer, however, the roof may be too warm.

These newer ideas about fresh air throw grave doubts upon the efficacy of air carriers and emphasize the necessity of life in the open, "living" air. My experience after observing patients for ten years does not lead me to believe that sleeping out of doors materially hastens recovery, provided eight to ten hours a day are spent in the open air and the night passed in a well-ventilated room; when, on the other hand, the patient returns to his indoor work, then sleeping out is very necessary. Ozone is said never to occur in rooms however well ventilated, but it is of no value to man except as an indicator of the purity of atmosphere.

A man out of doors is said to be exposed to one hundred times more fresh air than he could get in the best ventilated room in any given period of time. In any room bacteria are partially protected, while in the open they quickly die.

Good Food.

"Eat once for yourself, once to gain weight and once for the germs," is another way of stating that suralimentation is of importance in the treatment of tuberculosis. But just how important is suralimentation? What are we striving for? We saw that life in a poorly ventilated atmosphere had a deleterious effect upon the digestion and ultimately reduced the resistance to infectious diseases. The environment in which patients with pulmonary tuberculosis were treated twenty-five years ago made it almost impossible for them to escape the effects of an ill-ventilated atmosphere. Their appetites suffered and they could not eat. It was but natural then that along with fresh air, food, good in quality, great in quantity should also be insisted upon. That day, however, has now passed and any layman that does not know that fresh air and good food constitute the best treatment for pulmonary tuberculosis is indeed unobservant or crassly ignorant. What indeed are the purposes of this good food? Is it enough to keep the patient in nitrogen equilibrium or does he require more, and if

so how much more? Of what should his diet, roughly speaking consist? These and many other problems have received much attention during the past decade and it is of great interest and value to round up our new knowledge on these points. Given a patient without fever and without (serious) complications, the scales are the best criterion of the diet. I know of no better simile than the gasoline engine. The efficiency of the engine is the work it can accomplish on the road. Give it too much gasoline and the combustion is incomplete, the spark plugs become dirty, the cylinders coated with carbon, and the efficiency is greatly reduced. In other words, the engine does far better work when supplied with only enough gasoline to produce the best result. So, too, with the tuberculous patient. Give him what he can use but reduce his diet to the lowest point at which he will gain the required amount of weight. The tuberculous patient with an early lesion is often about ten to fifteen pounds below what he should weigh for his height and age. We should, I believe, aim to bring this patient up to and slightly beyond this weight, which is often ten pounds above what he has usually weighed. Do not try to do this, however, by too rapid gains, too forced feeding, which but too often defeats its very purpose. Be satisfied with a gain of a pound a week and a digestive system in fine order. Now when the required weight is attained, reduce the diet to the lowest point which will give satisfaction at the table and sustain the weight. This reduces the quantity of waste which the excretory organs must take care of to a minimum, makes out of many patients very different individuals and reduces greatly gastro-intestinal disturbances. You may ask me for details as how best to accomplish this. Here arises the question of individuality which is really of the greatest importance. My first advice to such a patient is gradually to quit taking milk and to eat only three meals a day. These meals should gradually be made to approximate what he must eat in the future. Fats are more easily taken in sufficient quantities than proteins or carbohydrates, but popular knowledge so emphasizes the importance of proteins that it is more necessary to emphasize the carbohydrates.

In the majority of patients beginning treatment for the first time, such directions smooth the course of recovery from the disease. In some, however, the digestive functions have never been very active and these patients must be coaxed and wheedled into eating an amount sufficient for their needs. Here we must have frequent days of rest, when the diet is somewhat reduced.

The greatest objection to sanatorium treatment is the difficulty experienced in individualizing the diet. I cannot to-day, however, go into details of how to treat digestive disorders. In closing this section of my paper, I might add that my advice to patients is as follows: "Eat as little as you can in order to gain, but you must gain this number of pounds. When you reach that weight, eat less still and just enough to maintain your weight, avoiding milk. You will have little upsets, little flare-ups of the disease, during which you will lose weight. Then the milk which you will have cut out of your dietary when you have gained enough, should be replaced and will enable you to regain quickly the pounds you have lost. It is not the amount you eat but what you assimilate that is important."

Rest and Exercise.

Too much body fat is no aid in combatting an infectious disease, and when the weight reaches the mark set, then another problem enters, which I shall now discuss. I refer to exercise. By inference you will conclude that up to this time the patient has been at rest. Generally speaking, the weight, temperature and pulse should be normal before any exercise is permitted. Recently two schools have sprung into prominence, one advocating absolute rest, the other maintaining that the only way to lose the cough and expectoration is by carefully regulated exercise which produces efficient auto-inoculation, a *sine qua non* of recovery. One advises that the patient's trousers be hid, for then you know where the patient is; the other says that the muscles must be hardened from the first in order to achieve results. If we weigh these opinions we see that while danger lurks in the first, grave risk is associated with the second. While rest may be employed in any home, the system of auto-inoculation can be efficiently and safely carried on only in an institution where the physician in charge is well and believes thoroughly in the system. Many have attempted it and some have come to grief. My advice to you is to beware of auto-inoculation unless you stand ready to do nothing but work alongside your patients. This is obviously impossible for most of us.

In any case, rest is imperative for many patients for some time, and those who advocate auto-inoculation through strenuous exercise believe firmly also in rest. In fact, some believe in rest so absolute that the patient with fever is not allowed to stir from his bed—he can neither read nor go to the toilet. He is fed, bathed, and treated as a patient ill with typhoid fever would be. This absolute rest is prescribed to prevent auto-inoculation and

when it can be carried out intelligently and faithfully may reduce a temperature that has long resisted all other treatment.

But say the temperature has reached normal, what should be the next step? It is here that the two camps are divided, for one would, as I say, hide the trousers, the other assist the patient to don them.

In regard to auto-inoculation, I confess it is a great temptation to all sanatorium authorities to push it. The big, husky fellows, the robust, buxom lassies, that sit about on porches or stroll around taking their exercise, possess much potential energy that it is a great pity to lose. This alone is a strong argument in its favor, but to make it a success, there are certain requirements that are difficult to obtain. As I have said, I believe that to achieve the best success, the physician must be well and strong and willing to work with the patients if necessary. In an institution it is very difficult to carry on other forms of treatment, but this can be overcome. Excessive auto-inoculation must be met by absolute rest, and few institutions have a nursing staff large enough to give the patients proper treatment. A certain number of patients fail to improve under this line of treatment and some feel that they have been injured. This, however, can be disregarded when due care has been exercised. Another unfortunate thing is the fact that even in the Adirondacks it is often too hot in the middle of the day for patients to work in the garden or fields. Crops mature and need to be reaped. The patients for one reason or another may not, without serious injury to their chances for recovery, be able to garner them. Shall the crops be lost or the patients injured? Such a problem is not infrequent. While it may not be perfectly fair to compare the results obtained in a sanatorium in England with those obtained in one in America, the comparison affords some interest. The results of such a comparison between the figures published by Paterson at Frimley, the birthplace of auto-inoculation, and those at the Adirondack Cottage Sanitarium, where a certain number received tuberculin treatment, seem to indicate that the permanent results may be better among the patients discharged from the latter institution. In any case, I believe the treatment by auto-inoculation in pulmonary tuberculosis is fraught with grave peril and I confess I hesitate to use it.

How to be happy in bed is a problem difficult of solution for many men and to attempt to keep a patient in bed who is fuming and chafing under the restraint when his temperature is normal

and he feels well is, I believe, useless. I do believe we have overlooked the value of rest of the lungs in pulmonary tuberculosis, which I might add can be obtained with any degree of success only when the patient is in bed. We know that a tuberculous spine needs fixation, that a tuberculous hip needs absolute rest, that a tuberculous knee or wrist used ever so little fails to improve.

What aim has the treatment of pulmonary tuberculosis by induced pneumothorax other than limiting the function of the lung and putting it as nearly at rest as possible? I believe the day is coming when by this means and by other operative interference which put the lung at rest we shall prolong the life and usefulness of many patients who to-day have but a few months of dreary, useless and hopeless existence ahead of them. I have known two patients, one with a broken leg, the other with a tuberculous ankle, make pulmonary recoveries only when absolute rest in bed had become necessary on account of the complication. For these reasons I have come to believe that a patient with an early lesion and any elevation of temperature should remain in bed for some time. Nor do I always limit it to patients who have a rise of temperature, for rest in bed will help the cough and expectoration more in many cases than any form of treatment. Digestive disturbances are often more readily combatted when to the treatment is added rest in bed.

You must of course use discretion for all patients cannot be so treated. When by rest in bed the temperature has fallen to normal and the question of getting up arises, I often inform the patient that the period of most rapid gain is from the time his temperature becomes normal to the time he begins to get up and to use his energy otherwise than for combating the disease. This, for many, makes the bed a little softer resting place. When such a patient is doing well, I frequently allow him to go for drives or boat rides or even, when begun gradually, to exercise by walking. On his return he goes at once to bed on a porch where he lives and takes all his meals except in cold weather. At first, these liberties should be permitted only on every other day, and the following day be spent in bed. It is surprising what such patients can accomplish later who devote their whole time to resting and working.

When the patient knows that at a certain date he must return to work and if I consider such a step at all possible, I endeavor to fit him for his future work. At the Adirondack Cottage Sanitarium we have found our workshop of the greatest help in

training the patient's muscles for his future activities. We teach them that unless they can do more work, take more exercise than is required by their future occupation and withal stand it well, it is folly to think of returning to work. For clerks, bookkeepers, mechanics, physicians, nurses and many others, we find suitable, useful forms of exercise which we prescribe, not with the idea of auto-inoculation but with the idea of producing tolerance to the amount of exercise necessary to their various callings. The patients enter into it heartily and I believe for us, at least, the results are far more satisfactory than those we could obtain by auto-inoculation.

Rest in bed is essential in all early cases for some time as well as for any patient that is not doing well. Rest harms few patients even when carried on longer than necessary. Exercise is often fraught with danger and must be prescribed as carefully as arsenic or strychnine, for an overdose is not less deadly.

Had I to begin treatment to-day for tuberculosis, knowing what I do, however little it may be, I would go to bed and remain there for two months, whether symptoms were present or absent. Such, I feel, is the importance of rest at the beginning of treatment.—*New York State Journal of Medicine.*

Progress of Medical Science.

SURGERY

In charge of E. E. King, G. A. Bingham and C. B. Shuttleworth.

Surgical Treatment of Gastric and Duodenal Ulcer

Dr. J. Petren (*Beitr. z. klin. Chir.*) has made a special investigation of the remote results in 325 cases of ulcers of the stomach and duodenum treated chiefly by gastroenterostomy. In the 37 fatal cases death was due in the majority to pneumonia or peritonitis. More than one-half the patients whose subsequent history was known remained in fair condition for periods of from two to twenty years, while the others complained of slight or more severe gastric disturbances. These were probably due in large part to recurrence of the ulcer, or they resulted from adhesions and other obstructions to motility. Cancer of the stomach developed in about 5.5 per cent. of cases of ulcer treated by gastroenterostomy.—*International Jour. Surgery.*

Tubercular Epididymitis: End Results of Seventy-one Cases

Barney (J. Dellinger). *Boston Medical and Surgical Journal.* This communcation deals with the end results in 71 cases of tubercular epididymitis occurring in patients treated at the Massachusetts General Hospital. The paper is presented for two reasons: (1) for the intrinsic interest of the cases; (2) because it shows most forcibly that orchidectomy is no more curative than epididymectomy and except in rare instances is unjustifiable.

Of the 71 cases, 76 per cent. were in a condition of good general health, in spite, in some cases, of the presence of tuberculosis elsewhere.

Sixty-two per cent. of the cases were free from tuberculosis in other parts, 37 per cent. showed tuberculosis elsewhere; whereas, before operation, the percentages were 55 per cent. and 45 per cent., respectively, showing that removal of the active focus, such as the epididymis, had put a damper on other foci.

The most frequent site of associated tuberculosis was in the lungs, 50 per cent., and in bone, 25 per cent.

Renal tuberculosis complicated the picture in 3 cases only—once before, twice after operation. From this fact two conclusions are to be drawn. First, that epididymal tuberculosis is rarely an evidence of general genito-urinary infection; second, that infection of the epididymis is rarely the result of the descent of a renal process. On the other hand, it also shows convincingly that renal tuberculosis rarely follows infection of the lower urinary and genital tract.

The condition of the side operated on was found to be healthy in 87 per cent. of the cases; active disease was found in the remaining 13 per cent., but in these a partial operation, such as scraping of a sinus, had alone been carried out. Of the 15 cases treated by epididymectomy, not one had returned with an outbreak of tubercle in the corresponding testicle.

The prostate and vesicals were found to be tuberculous (by palpation) in 63 per cent. before and 57 per cent. of the cases after operation. There seems to be little doubt that the prostate is the focus in these cases, although in one case that came to autopsy almost every other organ in the body showed tuberculous disease *except* the prostate and vesicals.

Subjective urinary symptoms were present in a slightly higher proportion of cases after operation than before.

In a large majority of cases sexual functions were undisturbed, but the semen was found to be sterile in 85 per cent.

Finally, a table of comparative results of epididymo-vasectomies and orchido-vasectomies is given, which shows that the claims that orchidectomy is necessary and gives better results are not backed up by facts. The superiority of epididymectomy is also manifest since whichever of the two operations is performed, tuberculosis of the opposite epididymis is almost certain to occur sooner or later, necessitating complete castration if orchidectomy is the question of choice.—*The Medical Chronicle.*

OBSTETRICS AND GYNAECOLOGY

IN CHARGE OF ADAM H. WRIGHT, K. C. M'ILWRAITH, FRED. FENTON, AND HELEN MACMURCHY.

Treatment of Syphilis in Pregnant Women

Pamard reports facts concerning four syphilitic families which he had under observation for periods of twenty to thirty years. In all but one, the husband had followed treatment only irregularly, and the first children borne by the mothers were dead and macerated. In the succeeding pregnancies Pamard administered to the mothers a pill containing one mg. of mercury bichloride each morning with breakfast, adducing reasons such as ease of labor and puerperium, or æsthetic considerations, in order to allay suspicion on the part of the mother. In each case, the next infant was born healthy. In one instance, however, the mercury having been omitted by mistake before a third pregnancy, a hydrocephalic child was the result. In none of the cases, moreover, did the mother show at any time any evidence whatsoever of syphilitic infection. In cases such as these, the uterine mucosa can alone be the seat of maternal infection and the remainder of the system is uninfluenced. It is inadvisable to use salvarsan in pregnant women and infants, as mercury has yielded uniformly excellent results and is without danger to life.—*Bull. de L'Acad. de Méd.*

Pituitrin in Obstetrics

Emil Vogt (*Münch. med. Woch.*, Dec. 19, 1911) at the Dresden Frauenklinik has made use of pituitrin in obstetrics, with excellent results. He has used it in abortion, premature labor, spontaneous and operative labor and post-partum hæmorrhage, both normal and pathological. He has used but one preparation of the drug which he thinks reliable. The injection is painless. The drug causes rhythmical contractions of the uterine muscle, and regulates and increases the amount of contraction. Its effect is seen in three to five minutes after the injection. The period in which the drug is injected is important, whether it is in the beginning of labor or in the stage of dilatation or expulsion. The most prompt effects are to be expected the nearer to

the rupture of the membranes it is given. The greatest effect is seen in the period of expulsion, the contractions being rendered much stronger and more frequent, and the pauses between the pains shorter. The suffering is not increased. In the third stage of labor contractions are increased, but here it is less to be trusted. To prevent the weakening of the contractions which is seen in contracted pelvis this drug is most useful. In these cases it should be given when the head has entered the pelvis and is being molded. In multiparæ, at the end of the dilatation and beginning of expulsion, the best results are gained, the expulsion being rendered very rapid. Since this drug has been used in cases of contracted pelvis, no forceps operations have been necessary, although contracted pelvis is common in Dresden. Tetanus uteri was never produced. The heart beats of the child are slowed, but no harm seems to result. The author believes that pituitrin acts promptly and energetically in the expulsive period; it makes normal labor more rapid, prevents secondary weakening of the contractions, and assists in the delivery in cases of contracted pelvis. It acts most strongly in the expulsive period, but acts also after the child has been born, by assisting the expulsion of the placenta. The author believes that in pituitrin we have the ideal means of increasing the contractions of labor.—*N. Y. Jour. of Obst.*

Treatment of Acute Inversion of Uterus

Mr. Miles Phillips (Sheffield) reported three cases of acute inversion of the uterus, seen by him in consultation shortly after their occurrence. In each case, as the patient was profoundly collapsed, no attempt was made at immediate reposition. There had been little or no post-partum hæmorrhage. The shock was treated by saline infusion, to which pituitary extract and morphine were added. After intervals of two, five, and twenty hours respectively the patient had sufficiently rallied to warrant operation. Under anæsthesia the uterus was in each case replaced without any great difficulty. All three patients recovered. He also furnished an analysis of 184 cases of acute inversion, collected chiefly from English records. The total mortality was 43 (23.4 per cent.). Of 79 cases in which the uterus was immediately replaced, in the presence of marked shock, 24 (over 30 per cent.) died. In 23 cases, in which it was definitely stated that there was no shock, immediate replacement was followed by

recovery in each instance. In 10 cases there was no note as to the presence or absence of shock (probably, therefore, it was not present in any marked degree); immediate replacement was successful in each of these cases. In 17 cases death occurred with the uterus unreduced, generally from shock, before the arrival of the doctor, who recorded the case. In 45 cases the uterus was allowed to pass into the state of chronic inversion, which was treated later, with success in every instance. In 2 corresponding cases death occurred from septic infection. Of the 43 deaths, 41 took place within a few hours. These figures, he suggested, supported his belief that in the presence of shock attempts to replace the uterus forthwith were inadvisable.—*B. M. J.*

Luminous Rays, X-Rays and Radium in Gynaecology

R. Foveau de Courmelles says that the rays of the sun or those from an electric lamp can be used for therapeutic purposes. Light penetrates to some depth, as is shown by sensitized papers placed in the spinal canal, the mouth, or the vagina. Photographs have been obtained with the chemical radiator of Foveau by placing positive sensitive paper in the vagina suported by red wadding, with the arc before the abdomen at a distance of 50 cm. The use of solar light or the arc light directed on the abdomen in prolonged sittings has a drying effect on certain cases of metritis and salpingitis. Radium is of great use in gynæcology. The radium tube is placed in the vagina, covered with a metallic tube, inclined so that the powder gravitates toward the diseased region. It has a powerful sedative, regressive action of the same nature as the X-rays. Radio-therapy is of value in diagnosis and in the treatment of fibromata. After ablation it is of use to prevent recurrence of cancers. Its use relieves pain markedly. The author claims to have seen the cessation of severe pains, hæmorrhages, and regression of the glandular metastases and of the tumors themselves. In a case of cancer of the bladder and uterus that was inoperable the pain and hæmorrhages were relieved, and the bladder, which at first was much contracted, increased in size so that a larger amount of urine could be retained. Some fibromata degenerate into carcinomata. The author applied the X-rays in two cases in which, from the color, pain, and cachexia, he inferred that this process was taking place. The result was an astonishing amelioration. All fibromata are favorably affected, the earliest treated giving the best results. Irra-

diation may cause abortion and sterilization in the human subject. Examination of ovaries that had been submitted to the rays showed the absence of follicles, all of which had become degenerated. The effect of this sterilization is valuable in the cure of fibromata. The more recent and the more hæmorrhagic the fibroma, and the older the patient, the better the results.—*Gaz. de Gyn.*

LARYNGOLOGY AND RHINOLOGY

IN CHARGE OF J. PRICE-BROWN.

Abstracts from Reports for the years 1910 and 1911 from Ear and Throat Department of the Royal Infirmary, Edinburgh. Reported by Raymond Verel and Milne Dickie—*Journal of Laryngology*, July, 1912.

This is a purely statistical report, and while too exhaustive to be detailed in full, it contains many points that are worthy of consideration. While we are limited, in the article, entirely to figures, no histories being given, one is struck by the enormous preponderance of certain classes of diseases over others—a preponderance no doubt partly attributable to climatic and local conditions. For the sake of convenience we couple the two years together.

1. *The External Nose.*—Out of a total number of 173 cases, including deformities, injuries and diseases, under 11 headings, 110, or 64 per cent., are listed dermatitis of the vestibule—a proportion of cases quite impossible in the improved climatic and social conditions prevalent in Canada.

2. *The Nasal Cavities* are presented under 24 divisions, numbering 2,948 cases. Of these, 814, or more than one-fourth, are put down to rhinitis, acute, sub-acute, or chronic; the large number being due in all likelihood to conditions similar to those in the above-mentioned dermatitis. We next have 726 cases of inferior turbinal hypertrophy, almost 25 per cent. of the whole, traceable, very likely, to the damp, cool atmosphere and the overcrowded conditions of the poor from whom the hospital patients are derived. In all these the proportion seems greater than with us in our drier climate and less density of population. Deflections of the septum are given: In the right 313, in the left 294; while polypoid middle turbinal and nasal polypi are placed at 200. Of atrophic rhinitis, three divisions are made: atrophic rhinitis (non-fœtid) 78, atrophic rhinitis (fœtid) 81, and rhinitis sicca 45. Of tubercular ulceration, the small number of 4 are noted, while of lupus, there are 20, of tertiary syphilis 38, and of malignant disease only 3.

3. *Accessory Nasal Sinuses.*—In this division there are 20 headings, totalling 169 cases, of which 69 were of chronic antral

suppuration, leaving the remaining 100 to be divided up among the other 19 headings; 17 are called naso-antral (choana) polypi, and 12 acute frontal sinus catarrh. Of dental cyst, invading the antrum, there are 9 cases, and of parasinusitis 8.

4. *Diseases of Naso-Pharynx, Pharynx and Fauces.*—They number 3,041 cases. There are 34 varieties. Of these, no less than 2,280 were adenoids and enlarged tonsils. Next comes chronic pharyngitis, including granular pharyngitis, in all 155 cases. After this, numerically, acute tonsillitis, 96 cases; pharyngitis sicca, 62 cases; peritonsillar abscess, 61; acute catarrhal pharyngitis, 46; tertiary syphilis, 48; secondary syphilis, 28, and epithelioma, 27. Hypertrophy of the lingual tonsil is placed at 18, lupus only 4, and somewhat remarkably, tuberculosis, out of over 3,000 cases, at 2.

5. *Affections of the Larynx and Trachea* number 407 in all, chronic catarrhal laryngitis heading the list with 66 cases, the acute form presenting 50. Tubercular laryngitis 63, tertiary syphilis 28, and laryngitis sicca 27. Lupus has the small number of 3, while of malignant tumors there are 14, 3 of these being intrinsic and 11 extrinsic. Of simple tumors of the larynx, 12 are recorded.

6. Of *Affections of the Nerves,* numbering 80 in all, no less than 46 are under the heading of functional aphonia. To the various forms of paralysis are assigned 30 of the others.

7. *Miscellaneous* is the last division under the headings of nose, pharynx and larynx. Out of 26 cases reported, no less than 16 are of goitre; 3 cases of foreign body conclude the list, all of which were in the right bronchus.

FRONTAL SINUSITIS, UNILATERAL OR BILATERAL, CURED BY ENDONASAL TREATMENT.

Tretop (Antwerp), *Jour. Laryng.*, for July, 1912.

The author considers that the two factors maintaining chronicity in these cases are imperfect drainage and the absence of oxygen in the sinus affected, the latter favoring the development of anaërobes. He believes that the erectile tissue of the turbinals can be contracted and the infundibulum rendered patent by the judicious use of cocaine and adrenalin. Catheterization and lavage of the sinus can be accomplished by means of a cannula and Pranz syringe, and many of the patients cured without resorting to radical methods. Of drugs that he has found useful are peroxide of hydrogen, protargol and coryfin. He cited a number of cured cases.

INTRA-NASAL CARCINOMATA.

Pirie, Harvey and Scott, *Edin. Med. Jour.*, Oct., 1911.

The rarity of intra-nasal malignant disease is mentioned, and the three varieties, sarcoma, endothelioma and carcinoma, referred to. Sarcoma is recognized as the commonest of the three, and as the intermediate one in regard to malignancy. Endothelioma being the rarest and least malignant, and carcinoma the most malignant.

The paper concludes with the report of a case of carcinoma of the nose, giving the clinical history, appearances and post-mortem findings. Headache and vomiting began in November, 1908; death occurred in February, 1910. At the post-mortem the disease was found to be very widespread in the nose and adjacent parts. It extended down into the palate and up into the brain and accessory sinuses. There was both ptosis and proptosis. In spite of this wide distribution of the disease, the glands remained unaffected. This, however, is not unusual in nasal carcinoma.

OSTEO-FIBROMA OCCUPYING THE TONSILLAR FOSSA (PROBABLY OF STYLOID PROCESS).

Kelsey, *Annals of Otol., Rhinol. and Laryng.*, Vol. xx, p. 463.

The patient, female, age 49, had ulceration of right tonsil six years ago. Second attack of pain eight months ago. Palate bulged on right side the size of a walnut. Operation by enucleation was attempted, the tumor being finally removed. It measured 4 cm. in all diameters and proved to be an osteo-fibroma. Death resulted on the thirteenth day from fulminating pneumonia.

SEVERE ANGINA IN A CHILD, RECURRING FIVE OR SIX TIMES A YEAR, CURED BY REMOVAL OF HIS'S FOLDS AND TONSILS.

Viollet (Paris), *Jour. Lar., Rhin. and Otol.*, July, 1912.

A little girl, aged five, had from infancy suffered from numerous attacks of febrile sore throat, the temperature running up to 39.5 C. to 40 C. The tonsils and adenoids were operated on in May, 1908, but there was no cessation of the attacks. So, in July, 1910, His's folds were carefully divided and the tonsillar recesses cleaned out. Since then the angina has disappeared. The writer thinks this case sustains the importance of His's folds in the genesis of recurrent quinsy.

OUR KNOWLEDGE AND IGNORANCE OF PLANT-VINCENT ANGINA.

Gerber (Konigsberg), *Zeitschr. f. Laryngol.* Bd. iv., Hept. 3.

The writer draws attention to the fact that ulcero-membranous anginas may resemble both diphtheritic and syphilitic affections of the throat. With regard to Plant-Vincent angina, it is supposed that we have two causal organisms for the one disease—a bacillus and a protozoan. Some hold that the two are merely different stages of the one organism—spirochætes and fusiform bacilli. But Gerber doubts the existence of any intermediate form. The staining reactions of the two are different, the bacilli always being darker than the spirochætes. Dark field preparations show more spirochætes, while stained films show more bacilli. An undecided question is: do both cause the disease, or is it limited to one? Experiments on animals seem to show that the spirochætes are the more active agents, but that the most severe changes are produced when both are present.

Salvarsan is an active remedy, not only against spirochæta pallida, but against all spirochætes. It therefore acts in Plant-Vincent angina. Gerber concludes, from an experience of three cases that when an ulcero-membranous angina reacts to a specific remedy for spirochætes, such as salvarsan, the angina must be a spirochæte disease. The fusiform bacilli, however, also disappears after salvarsan. Spirochætes and fusiform bacilli exist in the normal mouth beneath the gums, in the tonsillar crypts, and between the tongue papillæ; but in very limited numbers when compared with their presence in Plant-Vincent angina. Further, the microscopical appearances in scorbutic ulceration are exactly similar to those in Plant-Vincent angina. Gerber affirms that a whole series of ulcero-membranous diseases of the oro-pharynx are due to spirochætes and fusiform bacilli; and that Plant-Vincent angina is only a special clinical variety. In somes cases the spirochætes and fusiform bacilli are only accessory, as in certain forms of diphtheria, while in others they are absolutely causal. He holds, also, that the necks of the teeth are the usual nidus, and in conclusion, say that the organisms never occur in infants before the first dentition.

OPHTHALMOLOGY AND OTOLOGY

In Charge of Mortimer Lyon, M.D.

Operative Treatment of Glaucoma

Messrs. Brooksbank James and Stroud Hosford, in a paper dealing with operative treatment of glaucoma, recalled a description by Mr. James in 1909 of a method of operating upon all cases of glaucoma by cutting through the sclera from without, after having turned down a preliminary conjunctival flap to cover over the linear wound. Since then the operation had been somewhat elaborated by turning out a piece of sclera by the following method. The conjunctiva having been made anæsthetic, and a few drops of adrenaline solution instilled, a large conjunctival flap was turned downwards to the corneal margin. All further bleeding was now stopped by adrenaline. An incision was next made at the limbus, concentric with the corneal margin, by cutting with the edge of the Graefe knife near its tip, so that the lips of the wound were perpendicular. The paring was proceeded with until a fair depth of wound had been attained. A small puncture was then made, and the aqueous allowed to evacuate itself very slowly. A blunt-pointed Stilling knife was now inserted into this opening, and the wound enlarged throughout its extent. A moderately large iridectomy was then made in the usual way. The operator then proceeded to turn out a piece of sclera from the upper lip or the angles of the wound, endeavoring to ensure that some of the lining membrane was attached to its under surface. This was laid flat on the surface of the adjoining sclera, and held in position by the conjunctival flap being stroked over its surface. The special points in the operation were: (1) The fact that the edges of the scleral incision were perpendicular, not slanting as made by the Graefe or the keratome. (2) It would be noticed that the iris fell backwards much more readily than in an ordinary iridectomy, and did not require the introduction of another instrument into the eyeball to replace it. (3) The scleral flap could be cut by one of two methods. In some of the cases this was done by means of a punch. This, however, was somewhat uncertain, and occasionally punched a piece of sclera clean out, which was not desirable. (4) Another method was to turn outwards by means of scissors or knife a strip from one or both angles of the wound. If this plan were adopted it was better to

outline the strip by marking out its limits almost through the whole thickness of the sclera prior to opening the anterior chamber, as the relaxed state of the tissues when the aqueous had escaped rendered the proceeding more difficult. Mr. Hosford said he had carried the method out in all his cases of glaucoma except one, and that he did on the periphery of the iris. Whatever method was employed there was a predilection on the part of the sclera to close up. Ten out of 38 cases so treated closed up. Of the 38, 28 leaked by first intention and 8 of the remaining 10 leaked secondarily. The operation was simple.—*Brit. Med. Jour.*

The Subtlety of Nature's Craftsmanship

Under this title—which suggests, by the way, a teleology that the author would be the first to disclaim—Bishop Harman, in the *West London Medico-Chirurgical Journal* for January, 1912, has a very fascinating paper dealing with some points in comparative anatomy as applied to ophthalmology. The interesting point is elucidated that the facial muscles of man have come into being as a result of the evolution of the eyelids: the explanation being that, in the course of phylogenetic development, the muscles of the spiracle have been diverted to the eyelids, carrying with them their old nerve supply from the seventh, or facial nerve. We then see why the conventional rustic when he opens his eyes in astonishment, opens his mouth also! For the pet goldfish does the same when he breathes: as the mouth opens, the operculum swings back. So also we may explain the phenomenon of "jaw-winking" as a partial reversion, in imperfectly developed persons, to a bygone state of affairs when the association between spiracle and eyelid was very intimate.

Increased Intra-Ocular Tension as an Indication

A very valuable assistant in diagnosis has, in most cases, been overlooked in not becoming acquainted with the normal intra-ocular tension and its very gradual increase up to the greatly increased tension of glaucoma.

It is very advisable that the physician as well as the oculist be able to tell what is the normal and abnormal tension of the eyeball. A little practice will soon make one quite expert in this, and he will soon see its value.

Intra-ocular tension is always increased in constipation in children as well as in adults, hence it is of value when there is any doubt as to this symptom.

In children we cannot always depend on information given us by either the child or the parents, but we can easily satisfy ourselves by noting the tension of the eyeball.

Headaches in, behind and around the eyeball in young people, which are not associated with any error of refraction, are usually due to some gastro-intestinal disturbance, and a slightly increased intra-ocular tension is nearly always to be noted, and the symptoms relieved by the administration of suitable cathartics. This is especially to be seen in those cases when the patient complains of headache on rising in the morning.

The headache so often present after the introduction mydriatics can be greatly lessened or relieved if the physician will have his patient take aperients for a day or two before consulting the oculist, for even in children there is often to be found a slight increase of intra-ocular tension after the introduction of a mydriatic.

A knowledge of the normal and abnormal ocular tension would also put the physician on his guard against the introduction of mydriatics in cases of a slight degree of glaucoma or in non-inflammatory cases. M. L.

Editorials.

THE BRITISH INSURANCE ACT

It is very difficult for us in Canada to get a proper knowledge of the Insurance Act in Great Britain, which came into force in July. The Liberals praise it, while the Unionists curse it. The details do not appear as yet to be understood by the majority of the people chiefly interested. It is supposed by many who have independent views that it contains much that is good, but that it will help the unfit and the weakly, and not the thrifty and healthy person.

From a medical point of view, it seems certain that it will legalize and make compulsory contract practice in its most objectionable form, if it becomes effective. As most medical practitioners in Canada object to the principle of lodge or club practice, the endeavor of Mr. Lloyd-George to compel physicians to become the servants of the societies, or starve, seems, at least, remarkable. Of course, it is not considered that contract practice is unethical, but it is generally believed to be undesirable.

In our last issue we referred to the report of Sir William Plender, an able actuary, and a man of honesty and integrity, according to which it would appear that, under the new Act, physicians would get fivepence per head more than they previously received from the societies. The whole question has been carefully investigated by a committee of the British Medical Association. Provisions of the Act are so intricate that we cannot discuss details; but we may say that this committee says, among other things, that Sir William Plender gives "figures that have little bearing on the situation which will arise after

January 15, 1913, and that the inferences derived from it do not in any way weaken the claim of the Association for medical remuneration under the Act of 8s. 6d. per head, exclusive of extras."

Since the above was written, we learn that Sir William Plender has written to the London press, explaining certain features of his report. We find the following letter in the *British Medical Journal*:

Sir,—Misapprehension seems to exist in the medical profession and with the public in reference to the scope and purpose of my report to the Chancellor of the Exchequer of the 11th inst. It may be well, therefore, for me to say that my report is limited to an endeavor to answer a series of questions of fact embodied in a memorandum prepared by the Insurance Commissioners, and concurred in by the British Medical Association, as far as the information available in the selected towns enabled them to be answered.

It does not purport to be, and is not in fact, a statement of what the doctors may be reasonably entitled to per capita of the insurable population. What this sum should be is a matter of argument, in which not only the data set out in my report, but other factors, must obviously be taken into consideration.

I am, yours faithfully,

WILLIAM PLENDER.

5, London Wall Buildings, E.C., July 18th.

MEDICAL FACULTY OF QUEEN'S UNIVERSITY.

According to the regulations of the Ontario Medical Council, every student must spend a period of five years in actual professional studies in a University,

College or Medical School approved by the Council. The certificates presented must indicate that students have taken courses of eight months in each year.

Dr. J. S. Hart, of Toronto, is reported to have stated at the last meeting of the Council that Queen's University did not comply with the regulations for the eight months' session, and that Toronto University was the only one in the Province that did comply.

Dr. J. C. Connell, Dean of Queen's Faculty, has written an open letter to Dr. Hart, in which he explains that "the greater length of the Toronto session is mainly made up of an interval between the close of the lectures and the beginning of examinations." According to the calendars, the Michaelmas term was the same in both last session—Sept. 27 to Dec. 21. The Easter term in Toronto was from Jan. 9 to April 4; in Queen's, Jan. 3 to April 2. The examinations in Toronto began about May 1; in Queen's, April 3. Graduating exercises in Toronto, June 7; in Queen's, April 24. The actual number of teaching days in Toronto were 149; in Queen's, 152. "The Medical Faculty at Queen's is strongly of the opinion that the real interests of the students are better served by a prompt system of examinations, and immediate publication of the results."

Dr. Connell thinks the Council should not be concerned whether the examinations begin one day or three weeks after lectures close, nor whether the examinations are completed in three or five weeks. Queen's wishes to comply with the regulation, and "will make any change which is consistently required by the interests of higher medical education." As Dr. Hart and Dr. Connell are both high-minded and

fair-minded men, we think it likely they will not differ materially on matters pertaining to medical education.

THE CLINICAL CONGRESS OF SURGEONS OF NORTH AMERICA.

The history of this organization is well known by the surgeons of Canada. The first meeting was held in Chicago two years ago, when there was an attendance of over fifteen hundred. The success of the clinical phase was so great that a permanent organization was effected. The second meeting, held in Philadelphia, was also very successful, as was told by Canadian surgeons who attended it.

The third meeting will be held in New York next November, 11 to 16, inclusive. There will be a complete programme of the clinics for each day, copies of which will be distributed each day to those in attendance. The large ballroom of the Waldorf-Astoria will be the place of registration, and the headquarters of the Congress.

Preparations have already been made for five literary scientific programmes to be presented on the evenings of Monday to Friday, inclusive. These will include the address of the retiring President, Dr. Ochsner, of Chicago, the address of President-Elect Dr. Martin, Philadelphia, on "Treatment of Hepatic Cirrhosis"; papers by Wm. J. Mayo, George W. Crile, Howard Kelly, Charles H. Frazier, X. O. Werder, Robert L. Dickinson, John G. Clark, John B. Murphy; Otfried Foerster, Breslau, Germany; W. A. Lane, London, England; Ernest Wertheim, Vienna, Austria, and others. The subjects included in both

the clinical and literary programmes will be: General Surgery, Special Branches of Surgery, Surgical Pathology, Experimental Surgery, Gynæcology and Obstetrics.

UNIVERSITY GYMNASIUM

A permit for the erection of a gymnasium for the University of Toronto was issued August 2. It will be quadrangular in form, and fourfold in its manner of construction. There will be practically four fronts, with four departments—for gymnasium proper, Young Men's Christian Association, dining-hall, and Students' Union. The whole building will have four storeys, and will be of stone and brick construction.

The department for the gymnasium will contain really two gymnasiums, one for athletic games, and the other for apparatus work. The swimming pool will be the largest in Canada, 75 by 34 feet, and will give an opportunity for swimming races. The department for the Y.M.C.A. will have well-equipped committee, reading, secretarial, and class rooms. The department for the Students' Union will include reading, smoking, lounging, and billiard rooms. There will also be a large dining hall, and a theatre with seats for one thousand people. It is expected that the total cost will be about one million and a half dollars.

DISTRICT HEALTH OFFICERS OF ONTARIO

The Health Officers recently appointed for the seven districts of Ontario came to Toronto, August 1st to take a course of instruction in hygiene, especi-

ally in regard to matters pertaining to the working of the Public Health Act recently passed by the Ontario Legislature.

In addition to their attendance at lectures, demonstrations, and their work in the laboratories, they are consulting together under the supervision of Dr. McCullough, Chief Medical Officer of Ontario, and Professor Amyot, as to the best methods of carrying out the provisions of the Health Act in their various districts.

It is generally conceded that the men selected for the various districts are exceedingly well qualified for their positions. They have all mixed with the people to a considerable extent, have all paid more or less attention to general health matters, and three of them had an intimate knowledge of the present Health Act, having helped to frame it. We desire to congratulate our legislators on the magnificent work they are doing in connection with matters pertaining to public health in Ontario.

INTERNATIONAL CONGRESS OF MEDICINE (LONDON, 1913)

Preparations for the 17th International Congress of Medicine, which is to be held next year in London, England, are going forward rapidly. A circular has recently been issued by the Honorary Secretary, that all those intending to present papers at the Congress should notify him by February 28th, 1913, giving at the same time a short abstract of their paper. In this way a synopsis of the papers to be read will be prepared by official "reporters," and these will be translated into the various languages and published

in the Medical Journals before the Congress meets. Those taking part in the Congress will thus come well prepared to participate in the discussions. We would urge upon Canadians the necessity of doing their fair share to make the Congress a success.

It is with pleasure we announce that Dr. T. G. Roddick, of Montreal, Emeritus Professor of Surgery, McGill University, has been appointed a Vice-President of the Congress.

The Canadian National Committee, as at present constituted, is as follows: W. H. B. Aikins, Toronto; A. McPhedran, Toronto; G. E. Armstrong, Montreal; T. G. Roddick, Montreal; H. A. McCallum, London; H. G. McKid, Calgary; Jasper Halpenny, Winnipeg; C. K. Clarke, Dean of the Medical Faculty, University of Toronto; J. C. Connell, Dean of the Medical Faculty, Queen's University; H. H. Chown, Dean of the Medical Faculty, Manitoba University; E. P. Lachapelle, Dean of the Medical Faculty, Laval University; F. J. Shepherd, Dean of the Medical Faculty, McGill University, and representatives of the Canadian medical press: Geo. Elliott, *"Dominion Medical Monthly"*; John Ferguson, *"Canada Lancet"*; George O. Hughes, *"Western Canada Medical Journal"*; A. Macphail, *"Canadian Medical Association Journal"*; Harry Morell, *"Western Medical News"*; Adam H. Wright, *Canadian Practitioner and Review"*; W. A. Young, *"Canadian Journal of Medicine and Surgery."*

The Honorary General Secretary is Dr. W. P. Herringham, and any communications in regard to the reading of papers should be addressed to him at the Central Office of the Congress, 13 Hinde St., London W England.

CANADIAN MEDICAL ASSOCIATION

The meeting of the Canadian Medical Association at Edmonton, Aug. 10-14, was, in point of attendance and in many other respects, one of the most successful ever held. The attendance was a surprise to every one, and registration clearly indicates that the profession in the Western Provinces is composed of active men, who appreciate the benefits to be obtained from attendance at such meetings.

The success of the meeting must be largely ascribed to the energy of the President, Dr. H. G. McKid, of Calgary, who, during the year, visited every Province and invited a large attendance. His method of conducting the meeting was excellent, and his address as President was full of valuable advice, calculated to benefit the profession and especially designed to create a loyal and united membership in the association. His advocacy of a bond of union between County, Provincial and Dominion Associations was well received, and his prophecy of a more united profession on account of the consummation of the Dominion Registration Act was enthusiastically greeted. Dr. McKid is certainly deserving of congratulation for the success of the meeting.

The profession in Edmonton and Alberta gave the visitors a more than cordial welcome, but the many social events were not allowed to interfere with the meetings, which were all well attended.

The programme was well carried out, and the discussions in the various sections were, particularly in the medical section, most interesting. By a unanimous standing vote, Dr. T. G. Roddick, of Montreal, was elected Honorary President of the Association

for life, in recognition of his untiring efforts to promote and carry to a successful issue the Dominion Registration Act.

London was selected as the meeting place for next year, and Dr. H. A. McCallum of that city is the new President. On account of the meeting being held in this Province next year, the Ontario Medical Association will, according to constitution, meet informally at the same time, so that the prospects for a large attendance in 1913 are excellent.

EDITORIAL NOTE

The sympathy of the whole Dominion went out to Regina after the cyclone. Some pleasing incidents, from a medical standpoint, are recorded.

The nurses of Regina, who gave their services at the time, have, without exception, refused payment for the same, and have returned all cheques sent to them.

In response to requests for accounts, the doctors of Moose Jaw, who went to Regina on the night of the disaster to render assistance, have written, saying their services were given without thought of reward, and they would accept no money. The nurses of Moose Jaw also declined payment for their services.

ITEMS

Sir William Osler's trip to this continent has been postponed until next spring.

As previously announced, the second annual meeting of the Canadian Public Health Association will be held in the University Building, Toronto, September 16, 17 and 18.

Patron, His Royal Highness the Governor-General; Vice-Patrons, Lord Strathcona, Hon. R. L. Borden; Honorary President, Sir Edmund Osler; President, Dr. Charles A. Hodgetts; Vice-Presidents, Drs. J. W. S. McCullough, M. M. Seymour, E. B. Fisher; General Secretary, Major Lorne Drum; Treasurer, Dr. Geo. D. Porter; Chairman of Committee of Arangements, Dr. Chas. J. Hastings; Local Secretaries, Mr. T. Aird Murray, Drs. Duncan Anderson and Helen MacMurchy.

The fourth annual meeting of the American Association of Clinical Research will be held in New York City at the Academy of Medicine, on November 9, 1912.

The sessions will be held from 9 a.m. to 1 p.m., from 3 p.m. to 6 p.m., and from 8 p.m. to 10 p.m. The evening session will be open to the public.

Notable contributions on the Negri Bodies, on certain Fluids for Tubercle Bacilli in the Urine, on Adjustment and Function, on Psychoanalysis and Traumbedeutung, on a Pandemic of Malignant Encapsulated Throat Coccus, on the Single Remedy, on Indicanuria and Glycosuria, on Disease Conditions expressive of Correct Diagnosis, on Biochemic Problems, on the Two Most Far-reaching Discoveries in Medicine, and others are to be given. Every member of the Association is cordially invited to contribute a paper. The title should be sent at once to the Permanent Secretary, so that the programme may be completed.

Personals

Dr. F. W. Rolph, of Toronto, returned from Germany July 20.

Dr. A. C. Hendrick, of Toronto, sailed for England early in July.

Dr. H. C. Burritt, of 86 Wellesley St., Toronto, has removed to 205 Spadina Road.

Dr. A. C. Hendrick has returned from a three months' course of study in the chief surgical clinics of Europe.

Dr. A. W. Mayberry has returned from spending the summer in London, at the nose and throat clinics.

Dr. P. B. Macfarlane, who is doing post-graduate work in oto-laryngology in Baltimore, spent the month of August in Toronto.

Drs. Webster and Allan Shore, of Toronto, registered at the office of *Saturday Night*, 17 Cockspur Street, London, England, July 17th.

Dr. W. E. Ogden, physician-in-charge of the Muskoka Free Hospital for Consumptives, has resigned, and is leaving in September to study abroad.

Dr. Edward Fidlar, pathologist to the Hamilton City Hospital, has been appointed to the professorship of pathology and bacteriology in the Western University, London.

Dr. Charles Sheard, Jr., of Toronto, has been doing post-graduate work in the London Hospital, London, England, for some months. He went to Paris in July, and expects to return to London in September.

The British Medical Journal, in referring to the "oversea delegates" at the recent meeting of the British Medical Association, held in Liverpool, said: "Canada was well represented by Professor Irving Cameron, of Toronto, and Professor H. S. Birkett, of Montreal."

Book Reviews

An Index of Differential Diagnosis of Main Symptoms. By various writers. Edited by HERBERT FRENCH, M.A.,M.D., Oxon., F.R.C.P., Lond; Assistant Physician to Guy's Hospital. With sixteen colored plates and over two hundred illustrations in the text. Toronto: The Macmillan Company of Canada, Ltd. 1912.

The more one studies this work the more one admires the ambition which stimulated its production. It was really written as a companion volume to the "Index of Treatment," published by the same firm, and is an index only in the sense that the articles are arranged alphabetically. In reality it is a series of small monographs by eminent authorities on almost every symptom that may arise. The subject of differential diagnosis is covered to the fullest possible extent, and not the least important feature is the index wherein, under each symptom, is given all the different diseases in which it may appear. This makes it a work of reference which, as far as we know, is unique in medical literature. The text is well supplied with good illustrations, there being over two hundred, besides sixteen colored plates. The Editor, his collaborators and the publishers are to be congratulated on their production of such a thoroughly well-planned, useful, and even necessary, book as the one before us. We can most heartily recommend it as an invaluable addition to one's library.

A Handbook of Practical Treatment. In three volumes. By 82 eminent specialists. Edited by JOHN H. MUSSER, M.D., Professor of Clinical Medicine, University of Pennsylvania, and A. O. J. KELLY, M.D., Late Assistant Professor of Medicine, University of Pennsylvania. Volume III. Octavo of 1095 pages, illustrated. Philadelphia and London: W. B. Saunders Company. 1912. Per volume: Cloth, $6 net; half-morocco, $7.50 net. Sole Canadian Agents, The J. F. Hartz Co., Ltd., Toronto.

The third and last volume of this system of treatment has just been issued, and is well up to the standard of the first two volumes. It includes the treatment of the Constitutional Diseases, and Diseases of the Respiratory, Digestive, Urinary, and Nervous Systems. As in the other volumes, the treatment of conditions

on the borderland of medicine and surgery is discussed by surgeons as well as internists. Thus there are contributions by Goldthwait, the Mayo brothers, John E. Clark, Roswell Park, Moynihan and others.

Mention may be made of a few of the purely medical contributions. Diabetes, by Janeway; obesity, inanition, scurvy and rickets, by Hewlett; gout, arthritis deformans, by Futcher; Musser's articles on diseases of the respiratory system, and diseases of the pancreas, by Anders. The material is all of the very best, and, taken with the previous volumes, medical literature has been given a work which should serve as a standard for many years.

Infant Feeding. By CLIFFORD G. GRULEE, A.M., M.D., Assistant Professor of Pediatrics at Rush Medical College; Attending Pediatrician to Cook County Hospital. Octavo of 295 pages, illustrated. Philadelphia and London: W. B. Saunders Company. 1912. Cloth, $3 net. Sole Canadian Agents, The J. F. Hartz Co., Ltd., Toronto.

Undoubtedly the greatest bane to the general practitioner is the subject of infant feeding. Only too often, books written on this subject take it for granted that milk laboratories are so numerous and accessible that the physician has only to write a prescription for the formula desired and all his troubles are over. The great majority of infants must be fed on methods easy of application in the ordinary home.

Dr. Grulee has based his present work on his lecture course, delivered at Rush Medical College. He takes up first the physiology of the digestive system of the child. This is followed by sections on breast-feeding and artificial feeding. In the last section, nutrition in various diseased states is discussed. The book is very readable and practical in its teaching, and is illustrated to advantage, some of the colored plates being exceptionally fine.

On Writing Theses for M.B. and M.D. Degrees. By H. D. ROLLESTON, M.D., F.R.C.P., Senior Physician, St. George's Hospital; Physician, Victoria Hospital for Children, Chelsea. London: John Bale, Sons and Danielsson, Ltd., 83-91 Great Titchfield Street W.

The material of this brochure appeared originally in the *St. George's Hospital Gazette*, and was published in its present form by Dr. Rolleston on the suggestion of Sir Clifford Allbutt. The writing of theses for degrees holds practically no place in Canadian medical schools; nevertheless, the suggestions here offered will be proved of great value to all writers of medical literature. Dr. Rolleston points out how to choose a proper subject, and how to prepare and arrange the material so as to write a paper of both literary and scientific value. There is no doubt that the average writer in medical journals would profit considerably by a study of this paper.

BOOKS RECEIVED

Surgical After-Treatment. By L. R. G. Crandon, M.D., Assistant in Surgery at Harvard Medical School, and Albert Ehrenfried, M.D., Assistant in Anatomy at Harvard Medical School. Second edition, practically rewritten. Octavo of 831 pages, with 264 original illustrations. Philadelphia and London: W. B. Saunders Company. 1912. Cloth, $6 net; half-morocco, $7.50 net. Sole Canadian Agents, The J. F. Hartz Co., Ltd., Toronto.

Collected Papers by the Staff of St. Mary's Hospital (Mayo Clinic), for 1911. Octavo of 603 pages, illustrated. Philadelphia and London: W. B. Saunders Company. 1912. Cloth, $5.50 net. Sole Canadian Agents, The J. F. Hartz Co., Ltd., Toronto.

Sexual Impotence. By Victor G. Vecki, M.D., Consulting Genito-Urinary Surgeon to the Mount Zion Hospital, San Francisco. Fourth edition, enlarged. 12mo of 394 pages. Philadelphia and London: W. B. Saunders Company. 1912. Cloth, $2.25 net. Sole Canadian Agents, The J. F. Hartz Co., Ltd., Toronto.

Insomnia; Its Causes and Treatment. By Sir James Sawyer, of London, F.R.C.P., Consulting Physician to the Queen's Hospital, Birmingham. Second edition, with many revisions and additions. Birmingham: Cornish Bros. 1912.

Obituary

DANIEL MUIRHEAD, M.D.

Dr. Muirhead, of Carleton Place, one of the best-known physicians of the Ottawa Valley, was killed July 23 near North Gower, when an automobile which he was driving turned turtle and went into a ditch and injured him so terribly that he died within half an hour. Mr. Norman Cram, who was his companion in the car, escaped with slight injuries. Dr. Muirhead was 50 years of age and unmarried.

HON. JACOB BAXTER, M.D.

Dr. Baxter died at his late residence, Cayuga, July 23, aged 80. Early in his career as a practitioner of medicine he became very popular, and although for years he was a strong Liberal in politics, he was always highly respected by all parties. He was a member of the Ontario Legislature from 1867 until he retired in 1898, and was Speaker from 1887 until 1891. Shortly after retiring from Parliament he was appointed Registrar of Haldimand County, which position he held until the time of his death.

AMBROSE F. LEPPER, M.B.

Dr. A. F. Lepper died at Port Simpson, August 1st, from a malignant form of disease of the throat, reported quinsy. He had intended to go to China as a missionary last year, but delayed on account of the disturbances there. He went out West and was appointed assistant in a hospital at Bella Bella, Rivers Inlet, B.C. While working there he contracted the disease that caused his death.

Selections

Cardiac Disease in Children

In the course of a lecture on this topic in the *Clinical Journal*, Moon reminds us that in cases with chronic valvular disease which is well compensated, one does not so much require treatment as guidance. Plenty of fresh air, good food, and hygienic surroundings are of the first importance. Special care should be taken to guard against a fresh attack of rheumatism; the child should have woolen clothing next its skin, and not go out too readily in cold, damp weather. Where it is possible to choose a climate, one should select a dry, bracing place, with plenty of sunshine, and a house on gravel soil, with a southerly aspect.

Diet.—The meals should be small, and in particular, all excess of starchy foods and sweets must be avoided, which so readily give rise to flatulence and acidity; there is no objection to nitrogenous food being taken by children in ordinary quantities.

Exercise in moderation is undoubtedly good, but certain forms of it must be absolutely forbidden; thus swimming, and games which involve much running, such as football, also racquets and boxing, must be ruled out; nor is the element of competition to be permitted, for that always implies drawing upon the heart's reserve power. On the other hand, there is no objection to bicycling, if the patient will walk up the hills; riding, rowing, skating, and also cricket are all permissible in moderation. It is often well, according to Moon, even for cases with compensated heart lesions, to lie down for half an hour every day. With the first sign of failing compensation, as shown by shortness of breath, palpitation of the heart, or pulmonary congestion, then rest becomes imperative; it need not, perhaps, be absolute, but it will certainly mean lying down for the larger part of the day. It may then be necessary to employ specific heart tonics, children taking digitalis very well; often this is suitably combined with an aperient, and a useful prescription of Dr. Eustace Smith's is infusion of digitalis, infusion of senna, infusion of calumba, one drachm of each once or twice a day for a child of ten years.

At the same time Moon has generally found in these early stages of failing compensation that small doses of arsenic and iron act extremely well. When compensation has completely broken down with pulmonary œdema and ascites, then there is no material difference in the treatment of a child and an adult. On the whole, dropsy is not so common in children as in adults; on the other hand, the liver is more affected than other organs,

Conditions of Malnutrition

are exceedingly common among children and in their treatment a prescribed dietary becomes all important. Drugs occupy but small place in the problem of treatment.

A simple and generally uniform diet is indicated covering food of right nutritive value, easily digested and promptly assimilated ; for digestive symptoms, if not constant, are readily excited.

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and one seldom fails to observe in it symptoms of cardiac congestion in the majority of cases.

Special caution must be observed as the time of puberty approaches; in particular, one must be careful to prevent overpressure at school, and it is advisable that no serious employment should be engaged in till well after puberty is passed.—*The Therapeutic Gazette.*

Chronic Pancreatitis and Alcohol

Chronic pancreatitis has frequently been attributed to alcoholism on the ground that it is sometimes associated with cirrhosis of the liver. Thus Lando recently in 23 cases of cirrhosis of the liver, invariably found more or less intra and extra-lobular fibrosis of the pancreas. But only in 15 was there a definite history of alcoholism. Although in many of the other cases alcoholism was probably present, there yet remained a few in which it evidently was not the cause of the cirrhosis of the liver. The question therefore arises, Is chronic pancreatitis directly caused by alcoholism, or is it due to venous stasis following cirrhosis of the liver, however caused? It is obvious that chronic pancreatitis and cirrhosis of the liver may occur simultaneously and yet be independent of each other, the former being due to such a familiar factor as obstruction of the pancreatic duct, caused by retained secretion, calculi, malignant tumors, or inflammation.

To decide whether alcoholism can directly cause chronic pancreatitis without the intervention of cirrhosis of the liver, the writer investigated 27 cases of chronic alcoholism in which cirrhosis of the liver was absent. In 15 delirium tremens was present on admission to hospital, and death frequently was hastened by pneumonia. Death in the remainder was due to such widely different causes as cerebral hæmorrhage, diabetes, aneurysm and tuberculosis. In every case the patients admitted alcoholism, the effects of which were also recognized at the necropsy by such conditions as œdema of the meninges, chronic gastric catarrh, arteriosclerosis, fatty liver, and general adiposity. In only 2 cases was the intra and inter-lobular connective tissue of the pancreas normal. In the one case the patient, aged 35, suffered from delirium tremens. The necropsy showed acute cerebral œdema, fatty and parenchymatous degeneration of the heart, liver and kidneys, and chronic gastric catarrh. There was also chronic tuberculosis of the lungs and intestines. In the other case the patient, aged 34, also suffered from delirium tremens, and the necropsy showed acute cerebral œdema, double pneumonia, and fatty degeneration

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of the heart, liver and kidneys. In the remaining 25 cases there was more or less extensive hypertrophy of the connective tissue in the pancreas. The fibrosis was most marked in the centre of each lobule, and it often was greatest around the blood vessels and ducts, from which scar tissue radiated outwards, becoming less dense as it approached the periphery of the lobule. Frequently hæmorrhages were found in the gland, the parenchyma of which, with one exception, showed but little atrophy. In 17 cases the small arteries of the pancreas were sclerotic even when there was no sclerosis of the aorta and peripheral arteries. This sclerosis was found in men as young as 40, and the writer points out that microscopic examination often reveals arterio-sclerosis of the arteries when this condition has been overlooked in the macroscopic examination, to the unreliable use of which he attributes the general belief that arterio-sclerosis is not a common complication of alcoholism. Only in 2 cases was catarrhal inflammation of the pancreatic ducts found. The fibrosis, which chiefly involved the intra-lobular tissues, extended in many cases to the islands of Langerhans, which presented induration and hyaline degeneration. In 9 of these cases diabetes was present, and in one case in which only a few of the islands were indurated, there was no diabetes.

The changes in the pancreas described above are traceable to alcoholism alone. Sclerosis of the pancreatic arteries cannot account for these changes, as it was not always present. Similarly, the fibrosis cannot have been caused by the catarrh of the pancreatic ducts, for this condition was present in only 2 cases, and it was probably the effect of the chronic pancreatitis. But though the writer concludes that alcoholism is a direct cause of chronic pancreatitis, he admits that cirrhosis of the liver may affect both its origin and extent, by the venous stasis it may induce, for in his cases of alcoholism without cirrhosis of the liver, the pancreatitis was seldom severe, whereas the severity of chronic pancreatitis associated with cirrhosis of the liver is often great. Still this coincidence may be explained by the assumption that the alcoholism was of a more pronounced and advanced character than in the writer's series. Chronic pancreatitis due to alcoholism, with or without cirrhosis of the liver, is less marked than chronic pancreatitis due to obstruction of the main duct or one of its large tributaries. Digestive disturbances following faulty metabolism of fats and proteids are seldom, if ever, observed. The danger of diabetes from hypertrophy of the intra-lobular connective tissue of the pancreas is, on the other hand, considerable.—*The Medical Review.*

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Miscellaneous

There has recently come to hand the latest edition of "The Doctor's Factotum," published by the Arlington Chemical Company, of Yonkers, N.Y., manufacturers of Liquid Peptonoids, Lactopeptine, and other products well known to the profession. As usual in their publications, the physician will find a great deal to interest him, and his therapy should be considerably strengthened. Nor is the lighter side of his life neglected, and the book contains a collection of medical anecdotes which no one can afford to miss. If you have not already received a copy of this interesting publication, the Company will be pleased to forward one, by addressing them at their office, in Yonkers, N.Y.

The Recurrence of Adenoids

T. Guthrie (*Lancet*) states that the most important factor in the recurrence is the age of the child. In children under four years of age there is decided risk of recurrence; between the ages of four and seven the chances of recurrence are slight, and after the age of seven they are practically nil, always provided that the operation has been complete. Apart from the influence of age, it is certain that recurrence is much favored by an attack, within a short time of the operation, of one of the specific fevers, especially measles or whooping-cough. Again, according to C. Parker, in children who are the subjects of congenital syphilis recurrence seems to be the rule rather than the exception unless the general condition is carefully treated. Lastly, recurrence is probably favored by the presence of untreated anterior nasal obstruction, especially hypertrophic inferior turbinals, and is therefore apt to be met with in patients with high arched palates and narrow nasal cavities in whom removal of the adenoid does not lead to the establishment of free nasal respiration. All of these conditions have the feature in common that they tend to excite or maintain a state of chronic post-nasal catarrh, which should, therefore, wherever it is present, receive appropriate treatment if the risk of recurrence is to be reduced to a minimum. In conclusion, it is remarked that a true recurrence of adenoid vegetations is a somewhat rare event even in the case of young children, and the fear of it affords no valid argument against operation.—*N. Y. Med. Record.*

"there is no surgeon of any experience who is not convinced of the soundness of the principle which underlies Bier's hyperemic treatment, and this being accepted there is every reason to discard the ice bag since the latter brings about a condition directly opposite to what we strive to accomplish in carrying out this principle in the treatment of inflammation involving the peritoneum." Dr. A. M. Fauntleroy, Surgeon, U.S. Navy, *Medical Record*, August 3rd.

Dr. Fauntleroy demonstrates that while the ice bag relieves pain by practically producing numbness, as in a frost-bitten toe or ear, it also decreases hyperemia, leucocytosis, and encourages stasis in the part to which it is applied.

That heat is the direct antithesis of cold in encouraging favorable physiological action in inflammatory processes, whether superficial or peritoneal, here seems to be most logically and conclusively proven.

That antiphlogistine affords the most convenient, sanitary and satisfactory method of utilizing heat as a therapeutic agent would also seem conclusive from its extensive employment by the medical profession.

Urotropine in Dermatology

Otto Sachs (*Wien. klin. Woch.*) has administered urotropine in 10 cases of herpes zoster, 5 of erythema exsudativum multiforme et bullosum, and 2 of impetigo contagiosa, and found that formaldehyde, the derivative of urotropine, could be shown chemically by Jorissen's and the phenyl-hydrazin tests to appear in the contents of the vesicles or in the scabs in the cases of impetigo. The derivative of urotropine must, therefore, pass into the blood serum as well as into the cerebro-spinal fluid. Sachs also found that after a few days on urotropine the inflammatory reddening round the vesicles was markedly increased, probably as a result of the chemical action of formaldehyde. From these facts, and from the known facts as to the action of urotropine in meningitis and purulent ear disease, the possibility of the administration of urotropine being clinically useful in cases of skin disease, such as those described, is an obvious one. The author's cases were for the most part not sufficiently long under observation to decide the point. In one case of erythema exsudativum multiforme et bullosum affecting the backs of both hands, the lips, the mucous membrane of the cheeks, and the hard and soft palate, the pains in the mouth had almost completely disappeared after six to eight days on urotropine, and the raw surfaces resulting from the vesicles were almost healed. On the whole, the author inclines to the view that urotropine will be found useful, not only in the diseases already mentioned, but also in a series of other skin diseases, such as impetigo herpetiformis, dermatitis herpetiformis, pemphigus neonatorum et vulgaris, varicella, and variola.—*B. M. J.*

The Ice Bag in Appendicitis

In a most interesting article by A. M. Fauntleroy, Surgeon of the United States Navy, *Medical Record,* Aug. 3, 1912, the fact is brought out, basing the same upon a large number of cases of appendicitis operated, that the ice bag is positively harmful in this condition. In 50 per cent. of the cases operated, where the ice bag was used, the condition seemed to indicate that there was a noticeable lack of effort on the part of nature to wall off, from the rest of the abdominal cavity, the appendix, which was frequently very much congested, gangrenous or perforated. He also observed that in the ice bag cases there was a surprisingly low white cell count when one took into consideration the condi-

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FOR LITERATURE, ADDRESS

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tion found in the abdomen at the time of operation. From 8,000 to 11,000 white cells was the rule in these ice bag cases, when one would be justified in saying that the pathological condition warranted a constitutional reaction of from 20,000 to 30,000 leucocytes, or even higher.

On the other hand, in those cases in which the hot water bag or morphine had been used prior to operation (the ice bag not being used at all), the white count corresponded to what one would expect. Dr. Fauntleroy advances from his findings the logic that while the ice bag causes numbness, practically the same as in the condition of frostbitten ear or toe, it also decreases hyperæmia, leucocytosis and stasis in the part to which it is applied. That heat is the direct antithesis of cold in encouraging favorable physiological action in inflammatory processes, whether superficial or peritoneal, seems to be from his report most logically and conclusively proven.

In applying heat, whether it be for peritoneal or inflammatory conditions of a more superficial character, the most rational method is to use that which is not only sanitary, but, for the comfort of the patient, does not require frequent changes. In this respect, antiphlogistine, on account of its heat retentive properties, its cleanliness, and its ease of application, should appeal to the professional mind. That antiphlogistine has proven of great therapeutic value as a thermic agent is best indicated by its extensive professional employment and its many advantages over the hot water bottle and other methods of application of heat is readily discernible.

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Treatment of Laryngeal Tuberculosis

The following measures are suggested in *Union médicale du Nord-est,* for the relief of pain in tuberculosis of the larynx:

1. Apply to the larynx a solution composed of:

℞ Extract of opium ..... } of each 0.5 gramme
Extract of belladonna leaves .... }
Distilled cherry laurel water.....20.0 grammes
M. ft. solutio.

2. Spray into the larynx a solution of 0.3 gramme of morphine hydrochloride in 500 grammes of distilled water (Moure).

3. Insufflate into the larynx, by means of a suitable tube, a little of the following powder:

℞ Lead acetate .....2.0 grammes
Morphine hydrochloride ..... 0.2 gramme
Milk sugar .....10.0 grammes
M. ft. pulvis.

The mucous membranes should previously have been cleansed by means of a spray of potassium chlorate or sodium bicarbonate.

Another procedure of value in laryngeal tuberculosis is cauterization of the ulcerated surfaces, either with silver nitrate, with the galvanocautery, which acts more quickly, with tincture of iodine, or with the following preparation:

℞ Iodine ..... 0.3 gramme
Potassium iodide ..... 3.0 grammes
Glycerine .....10.0 grammes
M. ft. solutio. —*N. Y. Med. Jour.*

Psoriasis

Gaucher (*Gazz. degli Osped.,* 1912), in a clinical lecture on this disease, points out its affinity to asthma, gout, chronic rheumatism, arterio-sclerosis, chronic bronchitis, and emphysema. The explanation may perhaps be found in the relation that all these diseases bear to the digestion of the purin bodies, each

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disease being in one sense a disorder of nutrition. In psoriasis a process of demineralization seems to go on, and especially as regards sodium chloride; probably sodium chloride helps to render the purin bodies dialyzable, and its absence means a certain degree of accumulation of toxic extractives—*cf.*, the deficiency of calcium salts in tuberculosis. Clinically tuberculosis and psoriasis are frequently associated, psoriasis taking the place of tubercle in a tuberculous family, and many psoriasis cases ending in tubercle. Certain metastatic phenomena may also be seen in psoriasis—for example, an alternation between psoriasis and asthma, or even gastric ulceration and psoriasis; possibly some forms of rheumatism may be as closely allied. Psoriasis, in the author's view, is incurable; although it may have quiescent periods, it may pass off into pityriasis rubra, or into arteriosclerosis, interstitial nephritis, and, strangely enough, cancer of the rectum. The author is unable to offer any explanation of the last statement, but has observed cancer of the rectum so often in psoriasis that he is sure there is some association. One sees often borderland cases between seborrhœa and psoriasis, but the two diseases are really separate entities.—*B. M. J.*

A little girl was having her first ride on a big steamboat, crossing the Atlantic. The captain was explaining numerous things to her, among them his telescope.

"Now, what would you like to see through it?" he asked pleasantly.

"I'd like to see the equator."

The captain pulled a hair out of his head, and holding it before the telescope, bade the little girl look. "Do you see it?"

"Oh, yes," she said, "and there's a camel walking across it."—*The Doctor's Factotum.*

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The Sweat of the Tuberculous

The question as to the possibility of infection from the sweat of a consumptive has often been discussed, but little scientific evidence has ever been brought forward to prove that any real danger exists from this source. It has been recently reported, however, that M. Piéry has established the presence of the tubercle bacillus in the sweat in every patient with consumption that he has examined, and that inoculation experiments with guinea-pigs have yielded positive results. If these observations are confirmed, a fresh avenue of infection may be looked for, and it is possible that by this means may be explained the frequent and well-authenticated cases of the communication of the disease by a person attacked by it to another, with no hereditary liability to infection, who is brought into frequent contact with the patient, as in the instances of husband and wife, nurse and invalid, and the like. M. Piéry recommends, therefore, the careful disinfection of all garments, bed-clothing, and so on, used by a tuberculous patient, and his or her isolation as far as possible, especially at nighttime.—*The Medical Press.*

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Original Communications

RADIUM IN GYNAECOLOGICAL CONDITIONS

By Dr. W. H. B. Aikins,

Consulting physician, Toronto General Hospital, Toronto Hospital for Incurables, King Edward Sanitarium, etc., etc.

In collaboration with

F. C. Harrison, B.A., M.B.,

Assistant in Pharmacology, University of Toronto; physician, Toronto Hospital for Incurables, etc.

Radium has recently been used with varying success in certain gynæcological conditions, and in some of these, which are usually more or less refractory to other forms of treatment, the results have been most encouraging, and indicate the possibility that its use may in future prove of still greater value in this branch of therapeutics.

Among the conditions which are reported to have been favorably influenced by the application of radium are included cancer of the uterus, cancer of the vagina, fibroma of the uterus, metritis, chronic urethritis, inflammation of Bartholin's glands, and pruritus of the vulva. Jacobs[1] also recommends radium treatment for membranous dysmenorrhœa, chronic pelvic cellulitis, chronic salpingitis, and epithelioma of the vulva, but Finzi's[2] experience indicates that in the latter condition its beneficial results are problematical, and he is of opinion that in some of the cases which have come under his observation the growth of the neoplasm, instead of being favorably influenced, has even been accelerated by radiation.

The histological changes, which have been demonstrated in malignant growths after intense radiation, are in the first place

invasion of the neoplasm by the leucocytes, with accentuation of the normal cell changes. This is followed by disappearance of some of the cancer cells, which are replaced by fibrous stroma, and finally by fibrous tissue. There is also cell degeneration, especially in the superficial portion of the growth, and proliferation of the endothelium of the blood vessels. Wickham and Degrais[3] are of opinion that these changes are of a curative nature, and that there is invariably a definite proportion between the intensity of the radiation and the number of cells destroyed. Histological investigations have demonstrated that these degenerative and destructive changes extend to a depth of nine centimetres from the surface.

An important consideration in regard to radium therapy, as applied to malignant disease, is the fact that both the Röntgen and radium rays have been shown to exert an elective influence on cancerous growths, the superiority of radium in this respect being due to its action on the deeper tissues by means of the gamma rays. This action results in degeneration and destruction of the neoplastic cells only, the normal cells remaining unaffected, and it varies enormously in different varieties of tumors. It is accentuated by increased intensity of radiation, and the use of larger quantities of radium, so that a growth which has proved refractory to small doses for a prolonged period may possibly yield within a comparatively short time to larger doses. The action of the penetrating radium rays is considerably more selective than that of the Röntgen rays, so that they are much more likely to influence deep-seated growths. In this connection it should be borne in mind that, in addition to this selective action varying in different varieties of neoplasm, it may also vary to a certain extent in the same type of growth in different individuals, so that they will not require applications of the same degree of intensity.

This action on certain pathological cells is of the greatest importance in relation to radium therapy, applying, as it does, to the entire series of malignant growths, whatever their histological characteristics, and including rodent ulcer, epithelioma, carcinoma, lympho-sarcoma, round, spindle-celled and myeloid sarcoma. Certain pathological cells appear to possess a definite susceptibility to the action of the rays, in that the latter have a much more powerful influence on them than upon healthy cells, this special susceptibility leading ultimately to their destruction. Dr. Louis Wickham points out that this elective action means only that these pathological cells are less resistant to the influence of radium. The results of experience indicate that malig-

nant growths which run a comparatively slow course are as a rule more susceptible to this influence than those which tend to more rapid development.

It will be obvious that the intensity of the dose should be carefully regulated in individual cases, in order that the destructive action should be superior to the normal resistance of the cell, and that this careful regulation is absolutely essential has been proved by the fact that it has been demonstrated that too small a dose may under certain conditions even accelerate the evolution of the cell, and thus do positive harm instead of good.

Cancer of the Uterus.—The first reference in literature to the employment of radium in the treatment of cancer of the uterus is in a paper published in 1905 by Dr. Abbé, of New York, who has since done a considerable amount of work in this connection. Of the various gynæcological conditions which have from time to time been treated by this method, carcinoma uteri is the most important, and many cases have now been reported in which radium has been of very great service. Dr. Wickham reports several cases which were considered to be inoperable, but after intense radiation operation was rendered possible, histological examination of the growths removed indicating that they were undergoing progressive retrogression. In two of these cases the patients are reported to be living and in a satisfactory condition three and a half and four years respectively after treatment. In cases of this kind radium has also been found effectual in removing recurrences in the scar tissue after operation, and Dr. Wickham also recommends its use after operation for cancer in this region, as well as in other parts of the body, with the object of preventing recurrence. Applications of radium before operation result in thinning of the neoplastic tissues, and thus facilitate operation.

With the improved instrumental technique which we now have at our command, by means of which radium tubes can be introduced directly into the body of the uterus, a large and suitable field for utilizing the therapeutic qualities of radium has been opened up.

The apparatus which has been recently designed is very adaptable to this region, and as it can be fixed and kept in position for many hours it has the great advantage of allowing of long-continued application of the rays. These technical improvements, and the fact that clinical experience has now shown us the physical qualities of the rays and the quantities of radium which are necessary if we desire to obtain certain definite results,

render the treatment of the greatest value in uterine conditions, and indicate the possibility of its taking a still more important position in the future. The small size and convenient shape of the apparatus allows of complete saturation of a uterine cancer with the rays, which are therefore superior to the X-rays in this connection.

Nammacher[4] recommends a combination of radium treatment with curettement in deep inoperable carcinoma of the uterus. He is also in the habit of using radium in operable cases, when operation has to be postponed for any reason, with the object of preventing the growth from becoming inoperable. He reports 16 cases of carcinoma of the uterus, in which he applied radium after removal of the growth. Some of these cases were operated on more than eight years ago, and not one of them has had a recurrence. During the last few years he has adopted as a routine measure a three weeks' post-operative course of radium, and is of opinion that it is owing to this practice that his permanent results have been better than those reported by other writers.

Rubens-Duval and Cheron[5] state that they have had very satisfactory results from radium treatment in many cases of cancer of the cervix uteri. In some cases the patients remained without recurrence for several months, and in others the beneficial results may possibly be permanent, one patient having been well for one and a half years. During the course of the applications the tumors diminished in size, ulcers healed, the general condition improved and the patients gained in weight. If possible hysterectomy was performed as soon as retrogression was sufficiently advanced to allow of this, but if the case did not become operable the radium treatment was continued until no cancer cells could be demonstrated in the cicatricial tissue on histological examination. In several cases still under observation the treatment had been discontinued, owing to the fact that the cancer has apparently disappeared. In four specimens, two removed after death and two by hysterectomy, microscopical examination showed retrogression and destruction of the cancer cells. Some of the cases indicate that in an inoperable case it is unsafe to trust an apparent cure, as even after perfect cicatrization, and when the uterus appears to the naked eye to be perfectly free from cancer, it may still contain a disease focus, which may eventually lead to recurrence of the growth. They emphasize the imperative necessity of performing hysterectomy immediately the growth becomes operable.

In very severe malignant cases, especially when associated with profuse hæmorrhage, the patient's condition is frequently so

grave that the surgeon is doubtful as to the advisability of incurring the risk of an operation. In such cases preliminary treatment with radium often results in cessation of hæmorrhage, thus improving the general health of the patient sufficiently for removal of the growth to be undertaken under more favorable circumstances. Oudin and Verchère[6], in a publication on the treatment of uterine fibromata by radium, state that in their experience the applications have often resulted in cessation of obstinate hæmorrhage, which has resisted other forms of treatment, and that this has been accomplished by a certain amount of diminution in the size of the tumors and subsidence of the surrounding inflammatory infiltration, together with restoration to a certain extent of mobility to the fundus of the uterus, so that the patient has been in an excellent condition for a radical operation. They have arrived at the conclusion that in cases in which there is any contra-indication to immediate surgical intervention there is every justification for a trial of radium treatment, as it does not involve any risk, and in the majority of cases its results are beneficial.

N. S. Finzi[7] states that in his opinion carcinoma of the cervix is certainly relieved by radiation, and that in some cases inoperable growths are rendered operable. He thinks that whether in such cases it is advisable to recommend operation followed by radium treatment or radium treatment alone should be dependent on the conditions in the case under consideration and the rapidity of the improvement which has resulted from the preliminary radiation.

Wickham and Degrais report the following results from treatment by radium in cancer of the uterus: Excoriation of neoplastic nodules, cessation of hæmorrhages and secretion, relief of pain, diminution in and disappearance of fœtidity, and retrogressive evolution in the deeper portions of the growth. They report two inoperable cases of this nature, one associated with severe and intractable hæmorrhage, and the other with intolerable pain. In the first case a few series of applications of radium resulted in cessation of hæmorrhage and disappearance of fœtidity, and the patient lived until a year later, when she died from cancerous cachexia. In the second case, in which large quantities of morphia had been given for relief of pain, there was complete cessation of pain after two months' radiation, and the general condition had greatly improved. In a case of recurrence of cancer after operation, twenty-three applications of radium resulted in complete cessation of discharge, and the local conditions were so much improved as to allow of the assumption

of cure. There had been no recurrence when the patient was seen four years later.

It will thus be seen that radium has already proved of great service in disease of the uterus, and that it is a most useful adjunct to surgery in this region, as well as in other parts of the body. In inoperable cases it often facilitates surgery by reducing the thickness of the neoplastic tissues and diminishing the malignity of the field of operation, and from a prophylactic point of view most satisfactory results have been obtained from post-operative radiation of cicatrices. Even if operation is not rendered possible, in the majority of cases of malignant disease of the uterus radium treatment is beneficial to a certain extent in relieving intolerable pain and diminishing discharge. In some cases the "cross fire" method, namely, a combination of internal and external applications, is of great service. Owing to the facility with which radium tubes can be introduced into the body of the uterus, uterine conditions are very suitable for treatment, and in addition to this the analgesic, hæmostatic and decongestive properties of the rays are adapted to meet the requirements in the treatment of malignant disease of this organ. It is advisable to select apparatus by means of which applications of the greatest possible intensity can be given, in order to avoid the disadvantage of too long continued applications.

J. H. McLeod[8] states that in his experience the destructive action of radium in relation to the cancer cells has not apparently been so marked in cancer of the uterus as in more superficial conditions, but he thinks that this peculiarity may very possibly be explained by the difficulty of access to uterine growths, of watching and controlling the radium applications, and also by the great rapidity of malignant proliferation.

In this connection we would report three inoperable cases where the use of radium has been of distinct benefit. The first of these cases was reported by us in January, 1911[9], and the improvement has been continued.

Case 1. A patient, aet. 53, referred by Dr. Tuttle, of Tweed, Ontario, first noticed a bloody uterine discharge in January, 1910. She did not consult a physician until June. The cervix was cauterized, but serious hæmorrhage recurred, and in July she underwent an operation at the hands of a leading gynæcologist in Toronto, when the uterus was curetted, and the cervix amputated. This was all that was done, as, in the surgeon's opinion, the left ureter and bladder were involved, and hysterectomy would not be justified. A very grave prognosis was given.

On August 5th she consulted regarding radium treatment. The discharge, pain, and irritability of the bladder had continued. Dr. F. A. Cleland, Gynæcologist at St. Michael's Hospital, Toronto, was called in consultation, as it was felt that the treatment should be surgical, if possible.

The condition at that date, as reported by Dr. Cleland, was as follows: "On August 15th, in the vault of the vagina, and where the cervix had been removed, was a raw, bleeding, granular surface, about two inches in diameter, extending into the vaginal wall. The left side was more involved than the right, and in order to remove the growth completely, an extensive dissection would have been required, and probably the removal of the left ureter.

"The uterus was fixed on the left side, and examination by bi-manual method caused a good deal of pain. The body of the uterus was not enlarged.

"In view of the extensive operation which would have been necessary, and the uncertainty of complete removal, radium treatment was advised."

This patient has been under observation for over two years. Her general health has much improved, and she has increased in weight. At intervals, prolonged exposures to the radium rays, from tubes placed against the cervix, have been given. Local examination at present (September, 1912) would indicate that there has been no extension of the disease. The uterus is, if anything, more movable than at first, and there are no bladder nor bowel symptoms. The ulcerated area of the cervix has decreased, and now presents a small central ulcerated area, surrounded by firm fibrous tissue. There is no odor to the slight discharge.

Case 2. First came under observation on June 15th, 1911. The disease was considerably more advanced than the first case. She had been curetted as a palliative measure, but had had considerable bleeding since. Dr. Cleland was consulted as to the possibility of surgical treatment. He found the uterus fixed to the surrounding parts, and considerable extension on to the bladder. The cervix presented a large area of ulceration, which bled readily. Encouraged by the results obtained in Case 1, we decided to try radium. Almost from the first the bleeding stopped and the patient put on weight. She is able to be about, and enjoys a comfortable life. She has been continuously under observation since. There is an occasional slight bleeding, and some abdominal pain, no doubt caused by the adhesions to the surrounding organs. Dr. Cleland has also seen her from time to time, but has not advised further curettage or other operative measures, as the radium treatment seems to be holding the disease process well in check.

Case 3. Patient, 52 years of age, referred by Dr. Brandon, of North Bay. Came under observation March 3rd, 1912. She suffered from a cancer of the cervix, and had been curetted some weeks before. She was having almost continuous hæmorrhages, was confined to bed, and the condition was regarded as so desperate that her husband was told by a surgeon in consultation, that nothing could be done but wait for the end. When seen the condition was most assuredly a grave one. She was weak and exhausted from constant loss of blood. On examination the cervix was quite excavated, forming a crateriform ulcer, and the growth had extended on to the vaginal walls. Dr. F. A. Cleland, who was called in consultation, agreed as to the inoperable character of the case, and advised that radium treatment should be tried. She was given a very heavy exposure, much more than either of the previous cases. The bleeding soon ceased, and has only reappeared occasionally since. She put on weight, and was soon able to be about each day. The area of ulceration has steadily lessened, and all macroscopical evidence of cancerous growth in the vaginal walls has disappeared. In the past six months she has received four heavy exposures to radium, with apparent arrest of the process.

Metritis.—A fairly large number of cases of chronic catarrhal metritis have now been treated by radium, and the various writers on the subject are unanimous in the opinion that there is no doubt of its favorable influence on the condition. The instrumentation which has recently been devised has great advantages in this connection, and corresponds perfectly to the essential requirements. It is advisable, as far as possible, to avoid any irritation to the mucosa, and radium tubes capable of giving an intense degree of radiation are the most useful. In some cases it may be found necessary to modify the technique in the course of the applications, owing to the pain caused by the mechanical pressure. Radiation results in retrogression of the diseased tissues and cessation of the hæmorrhage and pain.

Dr. Wickham reports an extremely severe case of metritis in which operation was not undertaken. Two months after discontinuing radium treatment the general condition was good, the cervix apparently normal, and the symptoms of metritis had disappeared. In several other cases which have come under his observation the metritis has been completely cured in a month to six weeks after the end of the course of treatment, and in all these cases hysterectomy has shown that atresia of the cervix has never been produced. He concludes that in metritis radium treatment, with or without curettage, is absolutely indicated, but should be tried only when the case has failed to respond to other forms of treatment.

Chronic Urethritis.—Although the results of radium treatment in this condition have so far been very uncertain, it has been beneficial in several cases, and it is therefore justifiable to undertake it when the usual therapeutic measures have been tried without success.

Pruritus and Vulvar Vegetations.—Good results have been obtained from the use of radium in such cases, chiefly owing to its analgesic properties. Wickham reports the case of a woman aged 62, who suffered from vulvar and perineal pruritus of ten years' standing. After two series of applications the patient had long intervals of comparative comfort, and the pruritus gradually disappeared altogether.

Lupus of the Vulva.—Improvement has also been reported in cases of obstinate lupus of the vulva, and in chronic ulceration, presumably due to blenorrhagia.

Dr. Wickham strongly emphasizes the imperative necessity of the association of radium treatment with surgery whenever possible, and that it should not be regarded as an independent form of treatment, but merely as an adjunct to surgery. Up

to the present it has been chiefly employed in inoperable cases, but it has an extensive field of usefulness in the pre-malignant stage and in post-operative prophylactic treatment, and it has been found of great service to surgery in rendering operable tumors which are inoperable or practically inoperable.

In these inoperable cases, although it does not replace surgery, it may often with great advantage be used in combination with surgery. Wickham and Degrais conclude that it is one of the best forms of palliative treatment which we have up to the present, that it often prolongs life considerably, and even if it does not do this, may enable the patient to pass the remainder of her existence in comparative comfort. Finzi[10] is of opinion that, whilst it cannot be regarded as a universal panacea, which will infallibly cure every type of malignant disease, cases may be cured by it which are refractory to all other forms of treatment, and that in future it is certain to take a very prominent place in the treatment of malignant growths, and that where it does not cure it will often relieve. He also emphasizes the importance of prophylactic radium treatment as a routine measure, and of post-operative treatment, with the object of destroying residual neoplastic cells, which may have escaped the attention or have been beyond the reach of the operator. In some cases and in certain forms of growth, it may even supersede surgery and obviate the necessity for operation.

134 Bloor St. W., Toronto.

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DUST IN THE HOUSE AND ON THE STREET*

By Adam H. Wright, B.A., M.D.
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Dust always was and always will be everywhere. In the beginning, "the Lord God formed man of the dust of the ground"; after the Fall, the Lord God said, "For dust thou art, and unto dust shalt thou return." The good housewife and her assistants are continuously endeavoring to get rid of dust, while the men folk frequently bring as much dust as possible into the house, and scatter it round most assiduously. The latter have perhaps been driving over some miles of dusty roads in the early spring. They pass through the front door and hang their overcoats in the hall. As they hang there, some of the coarsest dust will fall to the floor through gravitation. Some of the finer dust will be carried, hither and thither, by breezes and drafts. Next day these coats are dusted in the hall, or perhaps in a living-room or library off the hall. Thus more dust is scattered around.

Good housekeepers attempt to keep down dust, collect it carefully, and burn it immediately. Many are discouraged, and also puzzled, when they discover that notwithstanding their well-directed efforts, dust still remains everywhere. It enters boxes, cupboards, bureau drawers, settles on shelves, mantlepieces, furniture, books, and everything in the house. It comes from every substance in the house—the floors, carpets, curtains, and every other bit of matter. When we walk, we cause dust from the floors, whether bare or covered with carpets, oilcloths, or rugs. When we touch a coin, a chair, a table or any other substance, no matter how lightly, we create dust; of course the greater part of such dust is perfectly invisible. In fact, most of such particles are so small that they could not be seen through the most powerful microscope.

Although we were all taught in our early schooldays something about the divisibility of matter, few of us properly appreciate the fact that such divisibility is almost infinite. Professor Gordon Ogden, of Pittsburg illustrates this fact in various ways. Let us borrow some of his illustrations. Absolutely pure water will not permit an electric current to traverse it. If a grain of

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salt is added to a hundred tons of perfectly pure water, the water becomes at once a conductor of electricity. The solitary grain of salt is divided into an almost infinite number of parts, and each of these tiny motes of salt acts as a ferry, by means of which the electric charge is enabled to cross the water. Let us consider, so far as possible, what this means. We have an immense tank, 25 feet long, 16 feet wide, and 8 feet high, containing 3,200 cubic feet or 360,000 cubic inches. Each one of these small cubic inches contains hundreds of millions of salt particles.

Another statement will be interesting to the small boy, and to some grown men. An average puff of smoke from a cigarette contains about four thousand millions of particles of dust.

Down at the bottom of the sea, under three miles of water, there is a very fine dust composed of the remains of the shells of plants and animals. It is estimated that one cubic inch of this ooze contains the remains of forty thousand millions of organisms, each as distinct in its individuality as is an elephant, and possessing a structure that is as perfect, so far as its use is concerned, as is the structure of the human body.

Dust is made up of a thousand or more disgusting things, together with a thousand or more things that are fairly clean, but more or less irritating—excreta of horses and dogs on streets, human excreta in tenement districts, human sputum, garbage, ashes, house sweepings, dust from buildings being constructed or demolished, earth from excavations, soot from chimneys, irritating powdered asphalt, often mixed into a slimy paste with mud, dung, and petroleum from automobiles. In the dust arising from these different substances the germs of the following diseases are found: tuberculosis, pneumonia, influenza, diphtheria, rhinitis (nasal catarrh), pharyngitis, tonsillitis, scarlet fever, whooping-cough, and some others.

Let us consider the expense of the dust nuisance. It has been estimated that the merchants of Chicago lose, through smoke and dust, a sum of money equal to the annual tax collected in that city. Toronto probably suffers proportionately as much as Chicago. The total money loss to the merchants of Toronto for this year will, therefore, be about six million dollars. The loss to people living in private residences will probably be about the same; but let us suppose it is only half, or three million dollars. Let us leave out of our estimates the value of the discomfort produced, but take into consideration the effects on the public health, and the money value of the injury inflicted. Gilman Thompson believes that nine-tenths

of acute inhalation diseases and chronic catarrhal diseases are due to dirt inhalation. Our knowledge of the evils of dust is in some respects inexact, but the many clinical observations and laboratory researches now going on will give us more definite information in the near future.

It may be stated now that some health experts, especially two living in Toronto, think that Thompson attaches too much importance to dust in speaking of the causes of acute and chronic diseases of the air-passages. I shall assume, however, that Thompson is right (as I think he is), and express some opinions as to "common cold." These colds occur most frequently in November, December, March and April—especially in the latter two months. The epidemics of colds in the late winter and early spring are due to the action of pathogenic germs in nearly all cases. A good deal depends on the amount of snow. The worst form of dust in Toronto is that which is blown in clouds along bare streets in comparatively cold weather, when perhaps we have some thawing during the days and freezing at nights. The microbes which come from filthy melting ice are the most virulent, and the other accompanying varieties of dust are the most disgusting that attack us as we go along our streets. These microbes as they "come off the ice" are comparatively mild and placid, but when they get warmed up within our internal economies they become active, hungry and thirsty. The great sterilizing power of the sun's rays makes an immense improvement in these regards during the hot summer months.

Let us now go back to the money aspect. It is difficult to put a money value on health and disease. In fact, some people think that health has no special money value—until they get sick. As I have suffered much from dust inhalation, and have observed very carefully the evil effects produced by the same for about thirty years, I feel that I can speak with some authority. I consider the money value of the injuries inflicted on myself is one to five hundred dollars a year. Every man, woman and child in Toronto suffers, to some extent at least, from the dust on the street and in the house. We may assume the average value per head of injury inflicted is at least ten dollars. This means a total of about four and a half million dollars. If we add this sum to the probable cost of dust to merchants—six millions, and to householders—three millions—we find the total money value of the injury done to Toronto by dust is over thirteen million dollars annually.

I have confined my rather rambling remarks to Toronto, because I have a more intimate acquaintance with its dust than

I have with any other dust in the world. I have been carrying a considerable quantity of it closely attached to my person, both externally and internally, for over thirty years. While it appears to like me, I don't like it. I would rather shake it off, but my wife doesn't like me to "shake it off" in her best parlor. Our good women of Toronto know more about the treatment of dust than the men. They are discarding the old, dirty, dust-raising broom and feather duster, and are using instead the vacuum cleaner and moist dusting-cloth. It is to be hoped that our men will learn something from them, and adopt "dustless" methods of removing dust from our streets. It would be still better if they would endeavor to remove from the streets all substances which tend to become dust before they are ground into powder, that is, before they become dust.

Without going into details as to the construction and cleaning of the roads, we have pleasure in saying that much good work has been done in recent years in Toronto. But the appropriations have been so pitifully small, as compared with the large sums urgently needed, that the Commissioner has been sadly handicapped. However, it should be remembered that accidental circumstances often prevent the street cleaners from doing the best work. For instance, flushing asphalt pavements is excellent; sprinkling from watering carts is useless or worse than useless. Why, then, did the street cleaners relinquish their methods of flushing a few weeks ago? The answer was simple: "Water shortage. We are now flushing again." The dry system of collecting dust in heaps, on macadam roads (if we have any such in Toronto), is of course antiquated and unsatisfactory. That fact is recognized by the Department, and various systems are being investigated. As a complete plant for a new system will be expensive, it seems fair and reasonable that the city authorities should have some time to investigate. Let us hope that that time has nearly expired, and that we shall see something new next year. We hoped for a time that the problem of street cleaning was solved on account of the good results obtained in some of the cities. We soon discovered, however, that methods admirably adapted for Berlin (probably the cleanest city in the world) might not be suitable for Toronto.

We have certain macadam (?) roads in Toronto which are kept fairly clean, and sprinkled with crude oil. When these two things are properly done the result is very satisfactory. We regret exceedingly that many ladies object because of the "horrid smell." Now, as a matter of fact, this smell is not "horrid" to a nose that can distinguish the difference between

a clean and a foul odor. It is almost certain that the air on these oiled streets is the sweetest, cleanest, and healthiest in the thickly populated portions of Toronto. However, there is still room for improvement, as the cleaning and oiling is not always properly done. We hope that when women consider these facts, and let their noses work "without prejudice," the smells will soon cease to be "horrid."

The other question of great importance now comes up. We know that after all our street and house-cleaning the air is still full of dust, although it may be invisible. What are the dangers from this dust? Fortunately, because of the knowledge we have obtained from the wonderful work of Pasteur and Lister, I think we can answer that question somewhat definitely. Although we cannot say that any dust is free from pathogenic germs, we may state that if the coarse dust, *i.e.*, the visible dust, is not allowed to rise into the atmosphere, but is properly collected and destroyed, the invisible dust will be very nearly, if not quite, innocuous.

THE PRESIDENT'S ADDRESS, CANADIAN MEDICAL ASSOCIATION*

By H. G. Mackid, M.D.

Mr. Chairman and Members of the Association:

If, in rising to address this National Association as its President for the year, I confess to some feeling of pride, I have little doubt you will forgive me it. It is a feeling born, and legitimately born, of a deep sense of the honor you have laid upon me; and I trust you will accept the assurance of my heartfelt thanks.

Yet, deeply as I have appreciated the honor, I have felt the responsibilities of the office in an equal or even a greater degree. At times during the past year, let it be confessed, the work and worries incident to preparing for this meeting have almost made me regret my election. We all owe a debt of gratitude to the medical men in Edmonton and the city authorities, for the arduous work they have done and the excellent help they have rendered.

Gentlemen, I do not propose in this presidential address to take up any one aspect of medicine in particular, as is done in many addresses of this character; nor to give a general review of the progress of medicine during the past year, with which indeed many of you are better acquainted than myself. What I have set before myself is rather to review briefly the work of the Association in the past two or three years; to point out the lines along which progress has been made and along which, as I take it, progress has still to be made; to estimate what part in it all the West has taken and may take, and finally to make an appeal for greater unity in thought and in aim among the profession in Canada for the advancement of this Association. If what I have to say shall render even the slightest service to the cause of the Association, and through it to the cause of medicine in Canada, I shall feel myself amply repaid.

The selection of Edmonton for the place of meeting of the Association this year is significant. It marks the awakening of the East—the awakening of the East to the fact that this western part of the middle west has come to man's estate and is showing the lustiness of youth. We of Alberta who have grown up, so to speak, with the Province, have been ourselves amazed at the

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strength and rapidity of her growth. But the East had not really recognized the fact. The Easterner knew much of Vancouver and Winnipeg, but little of Calgary and Edmonton. Your selection of Edmonton, therefore, came as a welcome surprise. When it was first suggested we immediately set our hearts on it. We desired greatly to give you a taste of Western hospitality, and we desired also that you should see us and observe how well we are getting on. Perhaps there is in us some such spirit as that of the boy who insists on his father measuring his height against the door every month.

However all this may be, you are eventually here, and in the name of Edmonton and of Alberta, I bid you heartily welcome.

This is only the second time that the Association has held its annual meeting in Alberta. In 1889 it met at Banff, and there were only 82 present. The times have changed since then. I could tell you many tales of practice in the early days in Alberta, but a Presidential address is not the place for my stories.

Only two meetings in the history of the Association have been held in the West previous to the present one. Of these, one, as I have said, was held at Banff, 23 years ago, in the year 1889. The President was Dr. James Ross, of Toronto, and the General Secretary was Dr. James Bell, of Montreal, both of whom have since died. The Vice-President for the North-West Territories at that time was Dr. Brett, of Banff, who is so widely and favorably known throughout the West. At that meeting there were present 82 members. The second of these two meetings was held in Vancouver in August, 1904. The President was Dr. Tunstall, of Vancouver, and the Secretary was Dr. George Elliott, of Toronto.

In reading over the minutes of the Vancouver meeting, I came across two resolutions of interest to us. One concerned the question of a Public Health Department for the whole country, the other that of Dominion Registration.

At the Vancouver meeting in 1904 a strong resolution was passed, urging the Dominion Government to establish a department in public health under a Minister of the Crown. Unfortunately, this resolution, as well as others of a like purpose, remained without effect. But I am happy to be able to say that matters in this direction now look more favorable. At the first meeting of the Canadian Public Health Association, held last December in Montreal under the Presidency of Professor Starkey, Premier Borden promised that his government would institute a general reform in public health matters, and put that department on a sound and modern footing. In this he was

supported by the Hon. Martin Burrell, Minister of Agriculture. We can thus hope that before long this very important question will be settled in the manner that this Association has been urging for years past. At the same meeting there was passed a resolution concerning Dominion Registration, to which Dr. Roddick, of Montreal, had given so much of his time. This too has now come to pass, but only this year. During the present spring the so-called "Enabling Clause" was passed finally by Ontario, the last of the provinces which had previously been afraid that their provincial autonomy would be endangered, and I am glad to be able to say that we are finally in a position to begin the detail work of arranging for a Dominion Council.

The Roddick Bill aims at the establishing of one set of examinations and one standard of qualifications for the practice of medicine in Canada, in place of the different examinations and varying standards of the individual provinces. It was introduced in the House of Commons by Dr. Roddick in 1902, then representing the St. Antoine Division, Montreal. The bill was passed, but owing to objections raised to certain features by provinces jealous as to their existing rights, it was found impossible to give effect to the act.

About two years ago a meeting of representatives of the Provincial Medical Councils was held in Montreal, when Dr. Roddick succeeded in securing the consent of all to certain amendments which he proposed to the original act. These amendments, removing earlier objections, were embodied in a bill which was passed at the 1911 session of the Parliament in Ottawa. It is part of the Act as it now stands that the provinces give their assent to the principle of the Act through a bill passed in their own legislatures, and it is this step which has now been taken by all the provinces save one.

When the Dominion Medical Council is finally formed it will be possible for a physician, having passed the examinations prescribed by it, to practise in any province of Canada, instead of, as at present, only in the province or provinces where he has satisfied the requirements of the respective Provincial Medical Councils. The Dominion Medical Council will have full authority over the purely professional subjects, while the provinces will probably exercise authority over the non-professional subjects of the examinations.

I have no doubt that I voice the sentiments of all here present, and indeed of the whole profession in Canada, when I say that we all owe a profound debt of gratitude to Dr. Roddick, who has been the direct means, and in a sense the only means, by which

this beneficent law has been placed on the statute books. We realize what a vast amount of time and energy he has expended on this work; how, indeed, he has given many of the best years of his life to it. And in thanking him we desire to record, not alone our appreciation of the work he has done, but also of the sacrifice it has cost him. If it is in his eyes any reward that the profession throughout the country feels grateful to him for his work; if it is to him any gratification that the whole of Canada has learned to call this bill the "Roddick Bill"; if it is any pleasure to him to realize that every member of the profession, thinking of this task which he has accomplished, looks up to him with respect largely mixed with affection, let him be assured that this is true. It is an achievement which perhaps no other medical man in Canada could have brought to pass. The task of reconciling so many divers and even warring interests in the various provinces of the Dominion; of overcoming prejudice, and of bringing together those of like views, was only to be accomplished by a man whose reputation was high from East to West and whose tact had become almost proverbial from East to West. People not only gave him affection, they gave him respect. It was the combination of qualities of head and heart in him which finally brought this great matter to a successful conclusion. One of the chief privileges of my office this year lies in the opportunity which it affords me of thus giving public expression on behalf of the Association to the gratitude which we all feel towards Dr. Roddick.

I have thought that this meeting would be interested in a short review of the recent work of the Association. The Association, it is true, has been in the last ten years steadily increasing in numbers, but the increase up to recently has been slow. The establishment of the *Journal* two years ago gave an enormous impetus to the growth of the Association. With its inception the condition of membership was radically changed. In former years a member paid $2.00 annual subscription, and paid it only when he attended the meetings. It is perfectly clear that with an annual attendance varying from one to three hundred the amount of money in the treasury was rarely sufficient to do more than pay the ordinary expenses of the Secretary's office, together with the expense incident to the annual meeting. The activities of the Association along general lines were extremely hampered. Without an official organ and without money, there was very little that could be efficiently done. Now we have changed all that. Thanks to the labors of the Finance Committee of the past two years, we have got an efficient *Journal* of the Associa-

tion established, which, under the able editorship of Dr. Macphail, has already won a place for itself in the periodical literature of the medical world. We have hopes that within a short time we shall be able to make it a weekly instead of a monthly. That will, however, depend upon the support given the Association by the profession at large throughout the country. In the second place, the establishment of the *Journal* enabled the Association to raise the membership fee to a reasonable amount, and to make membership in the Association and the payment of the annual dues a permanent matter. I am instructed by the Secretary and by the Treasurer to say that this does not mean that the Association has grown suddenly rich. In spite of the increased revenue, the necessary expenses connected with the publication of the *Journal* have eaten up nearly all the revenue. But the profession now has an organ to represent it in Canada. And, while it is yet too soon to expect that it can give adequate representation to all branches of the profession, and though it must naturally fall short as yet of the standard which many of you hope for it, it has nevertheless done extraordinary good work and is a *Journal* of which we all feel proud.

During the last two years there has been carried on by your officers a second big piece of work. I refer to the affiliation of the various Provincial Associations with the Canadian Medical Association. All of the provinces save one at present have declared themselves in favor of affiliation and have become affiliated. I am convinced that this work will be of the greatest benefit to the profession in Canada.

I pass now to a brief consideration of the needs of the future. Along what lines are advances to be made? To begin with, there is one matter, gentlemen, which I think is of paramount importance to this Association, and it is this: the consolidation of the profession in Canada into one strong and united body. That task can be accomplished by no other means than by this National Association. We have already done something towards this end. No longer than three years ago we were a very haphazard body. The membership was constituted, for all practical purposes, only by those who came to the annual meeting—from three hundred to four hundred men. And these, of course, varied enormously from year to year, according to the part of the country in which the meeting happened to be held. There was no possibility of concerted action in this state of affairs. A great step forward was made in the establishment of the *Journal* of the Association, and in making membership continuous, and the payment of the fee an annual necessity for continued membership. The estab-

lishment of the *Journal* involved, as I happen to know, a very great amount of labor on the part of the Finance Committee, and the thanks of the Association are due to the members of the Finance Committee, for the last three years, as well as to its able and self-sacrificing editor, Dr. Andrew Macphail. The *Journal* has a very excellent start. It had to be begun as a monthly, but we look forward to its becoming, before long, a weekly. Canada can afford plenty of good material for a weekly, if material were all that was needed. But, unfortunately, journals cannot live on material alone. The financial burden of the undertaking is very great; and the Finance Committee assures me that unless the membership roll of the Association increases very considerably it will be impossible to stand the expenses of a weekly. When we consider that the *Journal,* as the organ of the Canadian Medical Association, is the one great bond which alone can unite the profession from East to West, we cannot fail to realize the great importance of loyal adhesion to the Association. It means so much to the profession in Canada as a whole and to each individual medical man that there should exist a strong central body like the Canadian Medical Association to look after their interests, that I cannot conceive how any medical man should remain without it.

This then is the great problem—to get the Canadian Medical Association solidly cemented together. How is it to be done? To my mind it is to be done by an extension of the principle of affiliation. Two years ago the only province that had declared itself in favor of affiliation with the Canadian Medical Association and that became affiliated was Ontario. In the last two years all but one of the provinces have followed Ontario's lead, and the one exception has declared itself unofficially in favor of affiliation at an early date. This is the necessary beginning. But what we have yet to do towards organization is to create a properly constituted central body, a sort of parliament, with proportionate representation from each province. Hitherto we have had the Executive Council, but this body has been chosen in an absolutely casual way at the times of the general meetings by the members who happened to be present at the first meeting of the session. The members of the Executive Council should be properly elected by the respective Provincial Associations, and the Council should have more work given to it and greater responsibility put upon it than in the past.

But this affiliation of the Provincial Associations with the Dominion Association is only half of what should be done. The principle of affiliation should be extended to embrace the rela-

tions of the Provincial with the County Societies. At present this is practically barren ground. The County Societies have no relations to the Provincial Associations. They are casual and independent. Yet there can be no doubt that, to cement the profession together, the bond between the County and Provincial Societies ought to be quite as close as that between the Provincial and National Association.

This, then, gentlemen, is what I feel sure we must strive for, and what I ask your co-operation in. Let us begin with the County Societies, at the centre of things. Let us group, if necessary, several counties into one good District Society. Let these elect members as delegates or officers to the respective Provincial Associations. Where no County Societies exist, let the men of the particular region organize one. This has already been proposed for Ontario by the President of the Ontario Medical Association for this year. He said: "I think it very desirable that there should be an increase in the number of small county medical societies, and I should like to suggest that for this purpose the province be divided into ten districts, corresponding to the ten health districts recently established by the provisions of the new health bill. As there are forty-seven counties in the province, this would mean that each society would include four or five counties, which appears to me to be a practical arrangement. Then the method of securing membership in the Ontario Medical Association would be simplified by accepting the members of these smaller societies, which would obviously be in a better position to determine their qualifications." It seems to me that this proposal is of the greatest importance, and I would urge that a similar plan ought to be adopted by the other provinces. Indeed, I think, gentlemen, that if this address has any value at all, its value lies in the advocacy of the idea just described. It is not here the place to go into details of organization, which may well be left to the Executive Council and the General Secretary; but I am convinced that a close union of all the County Societies with their Provincial Association is the great need of the immediate future for this Association.

But it may be asked by some of you, what, after all, are the advantages to be gained by this scheme of consolidation or affiliation? Are we going to be any better off for it? Perhaps the best reply I can make to such a hypothetical question is to point to the extraordinary success of the American Medical Association. I presume it can safely be said that no National Association in the world has accomplished so much in so short a time for the general good of the profession as has the American Association.

Anyone who has followed at all closely its work cannot but admire the extraordinary amount of good, both for the profession and for the public, which it has accomplished in the last ten to twenty years. The scope of its activities has widened enormously. It would be impossible in an address of this nature to refer in detail to all these activities, but I cannot avoid calling your attention to a few of them. It is well known to you that in the matter of medical education not many years ago the States, with the exception of a few prominent universities, were in a deplorable condition as regards their medical schools. The proprietary school, and as a more or less natural result, the diploma mill, flourished. The American Medical Association set itself to clean their Augean stables. Their stables were encumbered with such stuff as the diploma mill, a low standard of professional conduct; commercialism, quack medicines, dishonest proprietary remedies, all sorts of fake cures, and all sorts of patent medicines. They have not rid themselves by a long way of these matters of reproach, nor indeed has any country anywhere, but they have waged a very good war against them, and in that they serve us as a very good example. What have they done? They have established permanent, and active, and hard-working committees on medical education, which have reduced the number of their low-class medical schools to nearly half what they were before. They have established a committee on legislation which in a great many ways has been of the greatest assistance in fighting the passage of bills in favor of unqualified sects in medicine, and in favor of the proprietary interests; they have established committees on such subjects of general interest as anæsthesia and the newer remedies which have given to the profession at large reliable information upon these things. They have organized a very large proportion of the profession in America into a united body; they have published the fullest and most accurate directory of the medical men in the United States and Canada that exists, from which, by the way, our own Association has derived much benefit. They have gradually made the *Journal* of the Association the best all-round weekly in the world; certainly the best for the general practitioner. Now the secret of the whole thing, the key-note of its success, has lain in its power to secure the loyal support of the profession throughout the country, and this they have done by the plan of organization that I have outlined above, County Societies uniting to form State Associations, and State Associations uniting to form the National Association. It means something to a man to be a member of a county society, for that is the only gateway to

membership in the State and National Associations. There is no reason why we in Canada should not make a like success with our own Association and our own *Journal*. All we need is a good start, and if we can arouse the enthusiasm the loyal support of the majority of the profession in Canada we shall be able to follow out a like successful career. If we can only secure a large enough membership to justify the expense of making our monthly *Journal* into a weekly, we can then go ahead at a great pace. The *Journal* will attract new members; it will pay and more than pay its own running expenses; it can serve as a medium of publication for the whole profession; it can influence the legislatures to enact good medical laws; it can wage effectual war on the nostrum vendors and the quacks of all descriptions; it can furnish up-to-date information on all subjects of interest to the general practitioner; and it can do a thousand other things which I have not space to mention here. Any tendency to the narrow view, to an exclusive attention to home affairs, to provincial chauvinism, to country or city narrowness, to personal absorption in one's own practice, to the exclusion of a larger view of national medical affairs, must be combated; and I think that I strike no false note in appealing to you all who are here present to act each in your own district as missionaries in this problem, to arouse a pride in our association and a willingness to work for it. I think that I can guarantee that so far as the West is concerned that spirit is already strong in us. Gentlemen, I know you will forgive me, knowing me as you do of old for an enthusiastic Westerner, if I now allow myself in closing a few words upon what seems to me to be the value of the West to the profession of medicine in Canada and to this Association, and a few words also upon the future of medicine in the West.

What is the value of the West to medicine? Or, rather, what is the value of the West to anything? For the one question includes the other. Does not the answer lie in the words, energy and newness. The West is young and lusty, and full of life. It has love of action, and it has a love of newness. It is unhampered by traditions, whether of conduct or of science. It will do the things that it thinks right, whether in conduct or in science. I really do believe that, in medicine as in the rest of human endeavor, the West is going to supply that leaven of originality which, after all, is "the one thing needful." The West thinks boldly and acts boldly, by necessity first, then by conviction, and ultimately by habit. Give the West a little more time to establish herself soundly in higher education, by means of State

universities, and she will yield a rich harvest of energetic and trained men who will have in them that invaluable dash of Western originality which makes for really big work. And now, what is to be the future of medicine in Alberta and the West? I think it will be admitted by everybody that the goal towards which we must strive in the matter of medical education in Canada is the establishment of a first-class medical school in each province of the Dominion as part of a Provincial University. This does not mean that each province must have a medical school as a necessity of itself; it rather means that with the enormous growth in population in Canada it will become inevitable that each province shall have a medical school, and that we must see to it that that medical school is a first-class one. In Alberta we already have, and have had for the past four years, a Provincial University, which is doing excellent work under the able principalship of Professor Tory. We have no doubt that before very long we shall be able to establish a good medical faculty. And I could point out that we have already in Alberta first-class facilities for the education of the medical men. Our hospitals are excellent institutions, and will soon be quite large enough to serve efficiently for the teaching of medicine. What we must aim at is, to establish close relations between the university and any proposed beginnings of medical teachings. There is plenty of money in the country with which to endow education. It must be our business to show to our wealthy business men the advantages which must accrue to the province at large from any financial help given to the cause of general education. I place my faith in the growing wealth of this new country, and not less in the inherent generosity of the Westerner. It seems to me inevitable that our country will before long not only have a university and a medical school that one may be proud of, but that these will be amply endowed with money made in the West and given by the generous men of the West. All this may probably happen in Vancouver before it happens in Alberta, but we shall certainly not be long behind.

Looking forward, as I do, in this hopeful way to the future of medicine in the West, and anticipating, as I do, the training of medical men in the West, I feel sure that when we do graduate men in medicine these men will do us credit. Like all Westerners, our graduates will have in them the love of travel, perhaps more so than they of the East have. And perhaps on the average they will have more money to do their travelling with. Already our medical men are well known in the big clinics in this country

and abroad from the mere fact that they visit them so often. This will make for broadness of view. If you get in any man broadness of view combined with energy and the progressive spirit you get exactly those qualities which must make for the advancement of medicine as a whole and the welfare of the patient in particular.

We have out here the advantages of a clean slate. We can begin right. We can begin where others leave off, unhampered by conditions that have got set and that are difficult to change. I hail the meeting of this Association in Alberta as a great stimulus. Our own men will be encouraged to better work and our laymen will have an opportunity of seeing what the profession is doing for Canada.

And now, fellow-members of the Canadian Medical Association, I desire in closing to thank you for your patience. Yet I would not quite finish with nothing but the customary "thanks" in my mouth. Rather would I end with a renewed appeal to all the members here present, and to the whole profession in Canada, to unite themselves heartily together in this National Association for the benefit of the individual and the benefit of the whole.

TEMPERO-SPHENOIDAL LOBE ABSCESS OPERATION AND RECOVERY

NEWBOLD JONES, M.D., TORONTO, CANADA.

On November 25, 1911, W. G., aged 18, was sent to St. Michael's Hospital from the country in an unconscious condition. He was placed under Dr. G. Silverthorn's service. The patient's aunt, who accompanied him, gave the following history: On November 1st he caught a heavy cold, but continued working until the 4th, when he went home, but refused to go to bed or see a doctor. On November 6th the pain in the right ear was so severe he took to his bed and a doctor was called. From the 6th to the 13th he suffered great pain. During this period he vomited frequently. The ear was treated with syringing with peroxide, heat, poultices and fly blisters applied externally. On the 13th the ear began to discharge and his condition seemed improved. The ear continued to discharge slightly. About Monday, November 30th, the boy was sleepy and dull. Vomiting began again and he complained of pain in ear and head, especially over the temporal region. From Monday till Thursday, 23rd, his temperature was sub-normal and pulse around 50. He was still dull and sleepy, but could answer all questions.

Thursday, 23rd, temperature 100, pulse 60. He lay dormant. When roused it would be about a minute before he responded. On Friday, the 24th, he became quite unconscious and was sent to Toronto the following day. Dr. Silverthorn sent for me. When I saw the patient, about 10.30 Saturday evening, November 25th, he was quite unconscious. Pulse 60, temperature 97. Pupils semi-dilated and reacting sluggishly to light. A thick profuse discharge from a large perforation in the drum of the right ear. No bulging of the posterior superior wall of external auditory canal. Anterior to the auricle, just above the zygomatic process, was a fluctuating tumor about an inch in diameter. Left ear drum normal.

I advised immediate operation. Dr. Silverthorn assisting, I made the usual mastoid incision and found pus immediately, which apparently came from the pre-auricular abscess mentioned above. Made a criss-cross incision over this and put in a gauze drain to the mastoid incision. Cleaned out the mastoid cells most thoroughly, which were full of pus. Amputated the tip. Made

a large opening into the antrum, and after making the usual transverse incision exposed the lateral sinus for about three-quarters of an inch. The sinus appeared perfectly healthy. I then considered the advisability of doing a radical mastoid, but contented myself with taking away a good deal of the posterior wall of the auditory canal and leaving the bridge intact. The roof of the antrum was then removed and the dura of the tempero-sphenoidal lobe exposed for about one inch. There was distinct bulging of same. With a sharp, sterile scalpel I incised the brain and let out about four drachms of pus and blood, put in a rubber tube and packed wound with iodoform gauze. No stitches were put in the incision.

The patient required very little anæsthetic and was practically conscious before he left the table. The tube was removed after 36 hours. He made an uneventful recovery and, although the wound was only partially healed, left the hospital for his home on December 18th, twenty-three days after operation.

Selected Articles

THE PROPER TREATMENT OF DIABETES MELLITUS AND ITS CURE BY DIET *

By Louis Kolipinski, M.D., Washington, D.C.

Upon the mind of the practitioner who has attempted to read the immense medical literature of diabetes mellitus of the past one hundred and fourteen years a throng of startling thoughts force themselves. His wonder is intensified when he muses upon the nature of the disease, its symptoms, its terminations, the mystery of its origin and cause, and the disappointing results of the ordinary and extraordinary efforts at treatment. The whole subject, however approached or surveyed, is confusing, contradictory, and perplexing. On every side one great riddle presents itself. In its development, its pathology, its chemistry, and the organs involved or at fault, the disease has baffled and confused the investigators. Cure and recovery are uncertain, misunderstood, and even relinquished from the dread of the inveteracy of the malady.

The practical end to such a train of reflections is the direct query: Can essential diabetes mellitus in man be cured so that health is completely restored and life will run its natural course to its termination in old age?

From the chaotic heap of theory, experiment, observation, and contradiction composing the medical history of the disease, the truth can nevertheless be extricated, and the answer to the question propounded is that diabetes mellitus in man, free as yet from dangerous complications, is easily curable, in proportion to the accuracy and persistency of the treatment, as well as the honesty and truthfulness of the patient.

The fact of greatest significance in the treatment of diabetes mellitus is that it is curable by diet. The fortunate and consistent reasoning of Dr. John Rollo, which led to this discovery, successfully applied by him, has not, however, been rightly valued and fully estimated by succeeding practitioners. That diabetes mellitus is curable by diet does not state the principle completely or correctly. Rather must it be said that diet alone

*Read at the Thirteenth Annual Meeting of the American Therapeutic Society, held in Montreal, Canada, May 31 and June 1, 1912.

is the cure for the disease, that by any other means this is an impossibility, and that the use of any medicine, drug, organ, extract, ferment, or enzyme is worthless and therefore injurious.

Before proceeding to a description of the method of diet which has proven accurate and successful in practice, the following working theory of the disease is submitted as one that is simple, consistent, and in harmony with our knowledge of the history of the malady in its progression from the antecedents of a patient until his end:—

Gout and diabetes mellitus are allied and analogous in many respects. Both spring from obesity. The obesity of gout arises from the daily use of alcoholic drink, together with the eating of much food, be the life led that of the wealthy epicure or that characterized by enormous beer drinking in the common man. Alcohol is always, lead occasionally, the direct cause of gout,—primarily of the transmitted form. Gout, obesity, and diabetes mellitus are hereditary diseases.

Diabetes mellitus is not caused by strong drink, but by overeating to a degree of marked robustness in the laborer or of overfatness in the sedentary. Every diabetic has a previous habit of obesity or of excessive eating. Often there is a fondness for particular foods or dishes with an excess of vegetable carbohydrates. Confirmation of this statement can be found with the family of the subject or with his habitual companions; self-observation is always inaccurate.

From these elementary statements there follows: (1) that gout precedes diabetes mellitus, but that the reverse is not true; (2) that diabetes mellitus is more common among people who eat much, but refrain more or less from alcohol—a fact noted in the Hebrew race; (3) that diabetes mellitus is found in children who overeat, but gout never; (4) that diabetes is much more common in women than is gout because they are less given to drink than men.

The lesions of gout result from the uric acid in the blood and tissues which finds no natural excretory channel, or from the agent of its oxidation or reduction.

The lesions of diabetes mellitus result from a permanent increase of glucose in the blood and its persistent discharge with the urine. The essential cause of this is the destruction, more or less permanently and completely, of the glycogen-forming function of the liver. All ingested carbohydrates appear as sugar in the blood and in the urinary excretion. It is the persistent excessive consumption of a vegetable or mixed diet which in most cases first leads to obesity,—markedly so in the middle-

aged. It is in the less resistant, less hardy and enduring that the conversion of sugar into glycogen in the liver-cells is arrested for all time.

Whether this be due to a permanent vasomotor paralysis in the liver, like that which temporarily results from the piqûre experiment of C. Bernard, in the medulla oblongata, or whether it be a glandular or cellular atrophy, or the absence of a ferment engendered in liver or pancreas, or some other agent of internal secretion, the diabetic subject is permanently bereft of the power of extracting sustenance from sugar and starch. He must henceforth abandon the proverbial staff of life—bread—or death will be the consequence.

Granting, therefore, that the liver's glycogen-forming power is destroyed by over-use, that this internal food is no longer stored in the liver-cells, and that through the lymphatic and vascular systems glucose circulates unchanged and unconverted, it is plain that the search for any curative medicinal agent is vain. The continued eating of sugar and starch and the continued glycosuria will hasten to its conclusion a disease always in its nature fatal: acute and rapid in the young, slow and chronic in the old. The youth is doomed by a glycosuria which nothing can retard or suppress. No diet will cause the sugar to disappear; the disease is in the grave or severe form. In the old subject, glycosuria may vanish or be lessened in quantity by diet; the disease is in the mild form.

If, however, man can live and grow on a diet containing but very little of carbohydrates, or none at all, no evidences of the continued existence of the disease need appear. No sensation or manifestation of ill-health will be felt or perceived, and the subject formerly affected will live on in continued good health; for it is admitted by everyone who has studied diabetes that the main source of glycosuria is the food consumed, its amount, and its kind.

That this can be done, and is even easily possible, will be shown, and the proof will be held to be that such a diet is capable of permanently removing all traces of morbid sugar from blood and secretion, of overcoming all minor non-fatal lesions of diabetes, and of restoring to the body its standard weight, and if desired, an excess thereof.

Having determined in the ordinary case of diabetes mellitus the specific gravity of the urine, the absence of albumin, the presence or absence of acetone and of diacetic and B-oxybutyric acids, and the presence of grape-sugar, by a copper or bismuth test, verified by fermentation of the liquid, the chemical

reaction is repeated as a demonstration before the patient, unless the latter be a small child. The chemical manipulation by which grape-sugar is identified is explained. Furthermore, the patient is told that the disease is easily curable by diet, not by drugs; that so long as no sugar is found in the urine he is well; that the finding of sugar means transgression in diet or error in the preparation of food, and that the continued presence of sugar in large or small amount, as proven by the tests employed, will render the disease a fatal one. It is explained that sugar will no longer be found after the third or fourth day of antidiabetic diet. The patient is furnished with a written or printed copy of the latter, as follows:—

Breakfast.—Artificial milk, eggs, ham or bacon and eggs, beefsteak, lamb, mutton, fish (fresh, salted, or smoked), raw tomato. A small cup of coffee or tea with cream.

Dinner.—Artificial milk, clear broth, raw tomato and lettuce with mayonnaise dressing, onion, cucumber, pickles. Any kind of meat, fish, game and fowl, sausage, tongue, brain, sweetbread. Any kind of cheese.

Supper.—Artificial milk, fish or eggs, cold meat, cheese, schmierkaese or curds; a glass of cream, tea, or coffee with cream.

At Bedtime, if desired.—Artificial milk or a glass of cream.

After three or four months the following vegetables and fruits may be tried at the same time the urine is tested for glucose (should it reappear, the offending food is eliminated). Asparagus, cauliflower, boiled onion, cress, spinach, endive, cabbage, sauerkraut, green beans, turnip, radish, kohlrabi, apples, cherries (Strümpell).

The artificial milk referred to consists of a modified formula of a series of liquid foods imitating milk chemically, devised by the writer and described in the *Medical News*, New York, December 21, 1901. It is prepared as follows:

1 broken raw egg.
2 teaspoonfuls of malt extract.
4 teaspoonfuls of olive oil.

Beat up in a bowl with a spoon or egg-beater for five minutes. Add gradually while stirring 1 pint of drinking water. Season to the patient's taste with table salt. In hot weather add crushed ice.

Varied and oft-repeated experience has proven that this dietary is amply sufficient to sustain and nourish the body to the point of inducing an increase of weight approaching obesity, *i.e.*, it is food more than enough for life, comfort, and health.

No medicinal agent is used in the treatment except the following saline purgative, which is administered when the patient is constipated, has hæmorrhoids, is obese, or where it is desired to reduce the weight to normal This combination is most valuable and efficient for relieving an engorged portal circulation. Its action is not depressant, like that of magnesium sulphate or the purgative mineral waters containing it. It acts in thirty to forty-five minutes, and with great certainty:

℞ Sodium phosphate,
Sodium sulphate.....of each ℥iv.
Dissolve with shaking in a quart bottleful of cold water.

The solution is a saturated one; a small amount of the salts remains undissolved. The dose is a wineglassful in a tumbler of cold water fifteen or twenty minutes before breakfast or supper. As the indications vary, it may be taken once or twice a day, or two or three times a week, for an indefinite period.

Another similar formula in imitation of the constituents of Carlsbad water, but better than this renowned mineral spring, is the subjoined:

℞ Sodium chloride ....℥iij.
Sodium bicarbonate..... ....℥iv.
Sodium sulphate.....℥iiiss.
Sodium phosphate .....℥iv.

It is dissolved in the same manner and in the same amount of water as the first, and is taken similarly in time and quantity. Its action is somewhat milder, its taste more pleasant, and it is gently antacid.

The diet above described, when partaken of for three or four days, invariably brings the specific gravity of diabetic urine to normal or subnormal, and not a trace of glucose can be detected by our customary tests. With this normal urine the diabetic returns to a state of health, the thirst, hunger, and excessive urination disappearing in a few days. The languor, weakness, and aching of the muscles are no longer perceived. The less grave lesions of the skin—eczema, pruritus vulvæ, furunculosis, carbuncle or phlegmon, and the peripheral gangrene of fingers or toes—heal spontaneously, and acetone, diacetic acid, and B-oxybutyric acid, which may have been found originally, are no longer present in the urine. An incipient diabetic cataract may clear up. The scorbutic appearance of the gums disappears, and loosening of the teeth is relieved. The diabetes is thus cured, as it were, by crisis, and remains so in proportion to the

faithful observance of the regimen prescribed. Those diseases which always end life in the diabetic, viz., pulmonary tuberculosis, pulmonary gangrene, chronic nephritis, extensive gangrene of the extremities, or multiple carbuncle, both with profound sepsis and persistent acidosis or diabetic coma, cannot, of course, be cured in this way. But as surely as these complications are always fatal in their progression, so are they always absent in the diabetic whose urine is kept permanently at normal.

With the method described the disappearance of the sugar is absolute and does not depend on how recent or how old the case, how mild the symptoms or how severe, and how little or much glucose is found in the urine. The urinary sugar of diabetes mellitus comes only from carbohydrate food, and vanishes when none is taken and a true antidiabetic diet is inaugurated. Glucose in the essential diabetes of man does not come from fat or proteid, whatever may be the condition found in experimental glycosuria, such as is produced by extirpation of the pancreas or resection of the duodenum.

In practice we find, however, ambulatory and unrestrained diabetics in whom a diet as efficient as the one described does not entirely eliminate the sugar from the urine, the glucose persisting with a fixedness that baffles and discourages the inexperienced practitioner. Such cases are those of the "severe type," as first classified by Seegen.*

This most unfortunate appellation, repeated everywhere by medical writers, cannot fail to cause much harm in the treatment of diabetes. In these unfortunates sugar still appears in the urine, though the diet be strictly and wholly albuminous. The liver is unable to make good all of this saccharine waste. The muscle glycogen and that in all other parts of the body is called upon. The nitrogenous and albuminous foods and the fats are likewise supposed to be turned into sugar and all of these sources do not suffice to stop this consumption of the body or mitigate the intensity of the disease.

A diabetic at almost any time or state of his malady, when following the diet described, begins in seventy-two hours to pass urine entirely free of sugar, which so continues as long as the food is the same. Therefore in each and every instance where glycosuria persists, it means that the diet has not been interpreted correctly and other food ingested in addition, *e.g.*, gluten bread, ice-cream, milk, or other harmful things, eaten in the belief that they are of no significance or else (which in practice is found oftener to be the case) by wilful and flagrant disregard

*Der Diabetes Mellitus, 1870.

of the instructions on the part of the patient. This leads to the unexpected discovery that, although the diabetic solemnly declares that the diet was followed as given, nothing else whatever was partaken of by him as food or drink, and that he is innocent of deception or prevarication, yet he is guilty of both. That anger or haste may not destroy the practitioner's intent to help the sick, it is wise to have patience and forbearance; later, by inquiry in the patient's family or of the housekeeper, there will be discovered the obnoxious food or drink responsible for the ill success of treatment. Often the prime mover and instigator of this duplicity on the part of the patient is some member of the family or a relative or friend who either does not favor the principles of proper treatment, is ignorant of the gravity of the disease, favors indulgence in eating to the diabetic, or believes the diet harsh or cruel. To some such influence the victim's integrity yields, and the disease persists as before.

Some diabetics, when their duplicity is detected and exposed, will confess great fondness for eating; others, that the diet is too rigid; others, that the eating of anything strongly desired cannot be followed by harmful consequences, or, lastly, that surely it is against reason and all natural right that bread should be interdicted forever—not the giving up of fire and water, but of bread, the mainstay of mortal life. This primitive form of daily food is so ingrown into our nature and instinct, is so closely associated with our ideas of aid in hunger and starvation, of charity and alms, that to view it as the prime cause of a deadly intoxication is impossible for the laity to conceive or understand. Yet in this extraordinary malady it must be given up for an indefinite time, or all attempts at cure will be futile.

When at the diabetic's second consultation the urine is found normal, and this fact has been demonstrated to him by the tests already used at the former interview, he is instructed to return every week or two for further supervision. The sugar reaction never reappears, the symptoms are lost, the health returns, and he is at liberty to pursue his customary work or occupation. With a patient who is faithful and adheres rigidly to the requirements, a monthly analysis for glucose is sufficient. After six months or a year slight additions of carbohydrates to the diet may be made if the patient so desires. Frequent examinations must be made in order that the physician may convince himself that such experiments are not harmful in causing a return of the disease. In fact, should the diabetic elect to continue the regimen that has cured him and beyond doubt saved his life from a deadly

disease, he should be induced and encouraged by every available argument to follow such a determination.

It is of great importance to guard a cured case from the former habit of overeating and obesity. The diet already described is prone to lead to the latter condition, owing to liberal consumption of the artificial milk. Should the body weight begin to rise above normal, or the patient present any evidence of dyspnea or cardiac insufficiency, the daily quantity of the emulsion taken may be reduced, or else a daily dose of the saline purgative already advised employed in order to bring the weight, in the course of a few months, to its normal standard.

Of the use of tobacco and liquor in diabetics, it may be said that neither is harmful and that neither can aggravate the malady. They must, however, be used sparingly and with proper discrimination. Two cigars per day or two or three pipes of smoking tobacco, an occasional glass of whiskey, sherry, or of other wine, not sweet, may be allowed, but not commended to the patient. Champagne and malt liquors, particularly lager beer, will prolong the glycosuria indefinitely.—*Monthly Cyclopedia and Medical Bulletin.*

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, F. A. CLARKSON, BREFNEY O'REILLY AND F. C. HARRISON.

The Association Between Mitral Stenosis and Renal Fibrosis

Cowan (J. M.) and Fleming (G. F.). *Quart. Journ. of Med.* The association between mitral stenosis and renal fibrosis has long been observed. The writers, having examined the post-mortem records of 335 cases of renal fibrosis, found that 60 had mitral disease (17.6 per cent.); and out of 93 cases of mitral disease, 60 had fibrosed kidneys (64.5 per cent.).

Other statistics bearing on this question throughout the literature on the relationships of the two lesions are added. The writers conclude that "the facts which we have collected are, of course, no positive proof of the truth of proposition four (*i.e.*, that mitral stenosis and renal fibrosis may own the same cause), but they are extremely suggestive." There is, we think, little doubt that the frequent association of mitral stenosis and renal fibrosis is not accidental, but the relationship between the two is not invariably the same.

The blood-pressure in mitral stenosis is often normal or sub-normal, but even more often above the average. The persistence of high blood-pressure, in the absence of œdema, strongly suggests the presence of renal fibrosis.—*The Medical Chronicle.*

The Pain-Sense in the Pleural Membranes

Capps (Joseph A.). *Archives of Intern. Med.* Capps has specially investigated the distribution of pain in about 240 cases of pleuro-pneumonia and pleurisy. It is an excellent paper, the chief interest of which centres in his method of experimental inquiry. He inserts a good-sized trocar into the thorax in cases of pleural effusion and withdraws the point. Before much fluid escapes, a long stiff wire with a dull point is passed through the canula, and the cavity therewith explored. The lung is easily distinguished by its spongy resistance. The parietal pleura can be reached at one or more points distant from the canula, where the wire becomes visible, pressing out an interspace. The dia-

phragm is recognized by its firm resistance, and its excursion with respiration, the wire moving in and out like a piston. The pericardium imparts a more rapid impulse, synchronous with the heart-beats. Out of 75 thoracocentesis operations, only 35 presented conditions favorable to free exploration. The pericardial pleura was more difficult to test than any other pleural membrane. Capps concludes: (1) the visceral pleura has no pain-sense. (2) Irritation of parietal pleura gives sharp pain accurately located by pain over spot touched; referred pain in neck or abdomen never occurs. (3) Central portion of diaphragmatic pleura is supplied by the phrenic; its irritation gives true referred neck-pain. (4) The peripheral rim of diaphragmatic pleura is supplied by lowest six intercostal nerves; its irritation gives pain in the lower thorax, lumbar region, or in the abdomen. (5) The pericardial pleura is supplied chiefly, if not exclusively, by the phrenic nerve; irritation of this area gives true referred pain in the neck. (6) In a large series of cases of diaphragmatic pleurisy about one-half had neck-pain; the large majority had pain in the lower thorax, abdomen, or lumbar region. (7) A few observations suggest that the phrenic and intercostal nerves supply the peritoneal surface of the diaphragm with pain-sense as well as the pleural surface. He discusses other points: the original must be consulted for these. The paper has many diagrams; fig. 1 shows clearly the mode of testing the pleural membranes for sensibility.—*The Medical Chronicle.*

Gallstones without Infection of the Gall-Bladder

Riedel. *Münch. med. Woch.* The writer heartily agrees with Aschoff and Bacmeister that the majority of gallstones form primarily in aseptic bile, and that evidences of cholecystitis so frequently found at gallstone operations do not prove that infection of the gall-bladder was the determining cause of the calculus formation. It is more than probable that in many cases the cholecystitis is a secondary complication.

The characteristic aseptic gallstone is a solitary, fairly large cholesterin stone. At first such a stone gives rise to symptoms which are mild but suggestive. A patient with such a gallstone will complain of a feeling of frequent discomfort and distension in the upper abdominal zone, especially after physical exertion or movements involving stooping. After a time he begins to suffer from attacks of pain in the right hypochondriac region, or more frequently in the mid-line; the pain is never severe and lasts

but a few minutes. Physical examination reveals, as a rule, no swelling and no appreciable tenderness; the diagnosis must be made on the patient's symptoms alone.

Two conditions are liable to be mistaken for aseptic stone. The first is the condition of "non-infective cholecystitis without gallstones," which, according to Riedel, is a very common affection and leads to adhesions to the duodenum which pull the latter viscus over to the right. The second condition is that of prehepatitis fibrinosa where a thick deposit of fibrin occurs over the anterior surface of the right lobe of the liver; this also is a purely aseptic process. The symptoms referable to a moveable kidney might suggest aseptic gallstone, but a careful physical examination should readily settle this question.

Jaundice is practically never seen in cases of aseptic gallstones, and thus the absence of this symptom in the history of these cases should never be allowed to influence the diagnosis against the presence of calculi in the gall-bladder.

Riedel thinks that, unless there be some direct contraindication to operation, these cases should all be treated surgically. His practice is to extirpate the gall-bladder and to close the abdomen without drainage.—*The Medical Chronicle.*

Alcohol and Disease

One of the most significant facts of modern therapeutics and social economics is the changed attitude of the medical profession concerning the use of alcohol in disease. Regarded merely as a beverage in health, there will always remain differences of opinion, but there can be no doubt whatever that alcohol does not hold the same place in the pharmacopœia as it once did. Hospital staffs no longer order the daily quantities of beer, wine or spirits to their patients that were customary a generation ago. In fact, with the general wave of temperance that has undoubtedly swept over the country, owing to changed habits on the part of the people, has come a reluctance to employ a substance the administration of which was felt to carry with it certain risks. It is interesting, therefore, to note that at the recent breakfast held at Liverpool last week under the auspices of the National Temperance League, the two principal medical speakers, Sir James Barr and Professor F. W. Mott, were neither of them total abstainers. Both recognized fully that too much alcohol was consumed at the present day, but both acknowledged that a great advance had been made in the direction of temperance.

Both, again, stated that they did not order alcohol in disease except in small quantities or in exceptional cases. Such testimony from unbiassed practising physicians is in itself a striking confirmation of modern experimental research into the action of alcohol upon the physical and mental economy. It seems likely, therefore, that the administration of alcohol in sickness will be yet more scientifically conducted in the future, haivng due regard to its limitations and drawbacks.—*The Medical Press.*

Urotropine

Emil Zak (*Wien. med. Woch.*) when examining the sputum of a patient with croupous pneumonia who had taken urotropine because of a purulent pyelitis, found that the number of organisms in the sputum was surprisingly small. The idea occurred to him that urotropine might be excreted in the sputum, and might exercise in the sputum as in the urine a bactericidal action. In further investigation of the point he administered urotropine to the amount of 2 to 3 grams (31 to 46 grains) per day, and demonstrated conclusively by a series of tests that urotropine, as such, was excreted in the sputum. Further, urotropine was administered to a phthisical patient, and muco-pus taken *post mortem* from the deeper bronchi was found to contain urotropine. The fact of urotropine being excreted through the bronchi is of great importance, since very few substances employed therapeutically are so excreted. From these investigations it appears advisable to make trial of hexamethylene-tetramine as a pulmonary disinfectant. Crewe had good results from the administration of urotropine in purulent affections of the gall bladder, and Kuln and Usener from sodium salicylate; Eichler therefore has tested a combination of the two drugs saliformin, and found that the bile gave a clear formaldehyde reaction and was noticeably bactericidal fifteen hours after the administration. The author considers these investigations worthy of further development. The author has also found that hexamethylene-tetramine has a local action in checking decomposition of the gastric contents. Doses of 2 to 4 grams a day (31 to 62 grains) are well borne. In one case of gastric ulcer with symptoms of stenosis the patient complained of pain, which, however, lasted for a short time only after the administration of 0.5 gram (7.7 grains). This patient had been suffering from very unpleasant eructations, and the gastric contents when withdrawn were rich in fatty acids and had an offensive odor. After four days on

urotropine the unpleasant odor had disappeared; the condition recurred when the drug was discontinued, and ceased on its readministration. Such results are hopeful and further trial is needed. As an intestinal disinfectant urotropine does not appear to be promising.—*B. M. J.*

Zoster

The occasional occurrence of this disease in epidemic form, the constitutional disturbances accompanying it, the associated glandular enlargement, and the degenerative changes that have been demonstrated in the posterior spinal ganglia, all point to an infectious agent as being responsible for the affection. Confirmatory evidence is afforded by the fact that rarely does an individual suffer from a second attack. Furthermore, the study of atypical forms of the distribution of the eruption indicates the operation of some general agent. J. Minet and J. Leclercq (*Revue de Médecine,* February 10 and March 10, 1912) made a special study of these atypical cases, which vary all the way from a zoster without any eruption to one in which the eruption is widely distributed. There are the abortive forms, in which the eruption does not go beyond the vesiculopapular stage; the forms with a double, bifurcated, or trifurcated eruption; the instances of bilateral, symmetrical eruptions; and the double nonsymmetrical, the multiples, and the aberrant forms. Many dermatologists of large clinical experience have never seen a case of bilateral symmetrical zoster; nevertheless, forty-three cases have been reported in the literature. The eruption may be simultaneously symmetrical, or after a normal evolution for several days on one side, it may appear in exactly the same form on the other side, and at the same level of the body. It may constitute a veritable belt about the body; this occurs more frequently on the face and on the thorax. Contrary to the views of older writers, the prognosis in these cases is no worse than in simple zoster, although the duration of the disease may be longer and the general reaction may be more intense. Only one fatal case has been reported, and in this instance the lethal outcome was the result of a secondary infection.—*Medical Record.*

OPHTHALMOLOGY AND OTOLOGY

In Charge of Mortimer Lyon, M.D.

Tuberculin in Diseases of the Eye

A discussion on tuberculin in diseases of the eye was opened by Dr. George Mackay (Edinburgh), who first discussed the use of tuberculin in the diagnosis of ocular tuberculosis. The Calmette reaction he considered very dangerous. Von Pirquet's reaction, if it gave a positive reaction, could be taken as correct. The ointment method was not reliable. In Koch's old tuberculin that produced by human or bovine tubercle could be used. The safest material to use was Koch's new tuberculin. No hard and fast line could be drawn as to the amount of the dose. Too large doses were a mistake. Dr. Peel Ritchie (Edinburgh) explained the methods he had used in the examination of the cases and the treatment. Dr. Hill Griffith (Manchester) described two cases of tuberculosis of the conjunctiva. One patient was employed as a herder of cattle, and had a swelling of the preauricular gland which was full of tubercle bacilli. Tuberculin brought about a complete cure. The other case was that of a boy, who did equally well. Dr. Louis Dor (Lyons) had treated 80 cases of interstitial keratitis in four years. Tuberculin should be used as a diagnostic agent. For this he advocated the employment of very small doses until a reaction was obtained. He had never seen any trouble from this method, but the action of it was slow, and should never be discontinued until after at least two months. He regarded the bacillary emulsion (B.E.) as the most satisfactory. Dr. W. B. Marple (New York) said that the treatment of tuberculosis of the choroid had not been very satisfactory. Mr. T. Harrison Butler (Coventry) had used Calmette's reaction largely, and he had seen very bad results and had entirely given it up; it was also most unreliable. To von Pirquet's reaction he considered that about 90 per cent. of adults reacted, and it was obviously unreliable. The old tuberculin reaction he thoroughly believed in. If after three injections at a week's interval no reaction occurred he considered that it was positive that no tuberculosis existed. Of his cases of phlyctenulæ he had found that about 70 per cent. had evidence of tuberculosis, and he quite thought that Parinaud's conjunctivitis was of this nature. Mr. Bishop Harman (London) thought they were justified in using

injections without relation to the opsonic index. He strongly protested against the idea that all phlyctens were tuberculous. Dr. Mackay, in reply, said that he quite agreed that Parinaud's conjunctivitis was tuberculous, and commented upon the remarks of various speakers. Dr. Hinshelwood (Glasgow) read a paper on the treatment of acquired word blindness. After lesions which produced word blindness the re-learning of reading was extremely difficult, but age was a very important factor—the younger the patient the easier would it be. Most cases followed cerebral hæmorrhage, but no attempt at re-education should be attempted till all acute symptoms had completely disappeared. Dr. F. W. Eldridge-Green quite agreed with the treatment advocated by Dr. Hinshelwood.

Salvarsan

Mr. Sydney Stephenson opened the discussion on salvarsan in the treatment of syphilis. He emphasized the fact that treatment with salvarsan should go hand in hand with the Wassermann reaction. It was a fact that since salvarsan was introduced a certain change had taken place with regard to the disease, and some nerve changes, such as paralysis, which are looked upon as a late tertiary sign, now came on much earlier. When injections were made with perfectly fresh saline, no symptoms of pyrexia were produced. It had been suggested that if there was any affection of the optic nerves salvarsan should be avoided, but clinical evidence was strongly in favor of the fact that it had no deleterious effect on the optic nerve and was perfectly harmless to the eyes. As regards interstitial keratitis, it did not appear to be superior to mercury. In irido-cyclitis of secondary syphilis most people agreed that salvarsan acted with great energy and promptitude. Mr. Stephenson thought that the drug was quite harmless as regards the eye, and that it should be given by intravenous injection. Mercury should be continued during the whole course of treatment. Dr. Igersheimer (Halle) had done much experimental work. The great feature of salvarsan was its poisonous effect upon the spirochætes, but it was not poisonous to human beings. The percentage of negative Wassermann reaction was greatly increased in the cases in which salvarsan was used in combination with mercury. Neo-salvarsan had the great advantage of being very soluble, but in large doses experimentally was very fatal to animals, though they stood small and repeated doses well. Neo-salvarsan had produced far quicker

effects in affections of the anterior part of the eye, but he preferred salvarsan when the deeper structures were involved. Dr. W. B. Marple (New York) had used it in interstitial keratitis and in gummatous iritis. He had not seen much good in the former, but it acted better in the latter. Dr. Maitland Ramsay (Glasgow) had used it in 22 cases by intravenous injection. Except in one series of 5 cases treated in one day, no general symptoms were seen. In the 5 cases, when vomiting was produced it was probably due to an error in its solution. Neo-salvarsan was much more easily prepared. It became easily oxidized if kept in solution, and was then highly poisonous, therefore any solution used should be quite freshly prepared. Mercury should be used the whole time. Twenty of the cases were chronic and 2 were acute. In the chronic cases 5 were congenital and 15 acquired. It acted far better in acute cases and much more rapidly. He did not think that therapeutically there was any superiority of neo-salvarsan over salvarsan. The best results were seen when mercurial treatment was combined with the other. He doubted very much if salvarsan had any bad effect on the optic nerve, but mercury should always be combined with salvarsan. Mr. S. H. Browning (London) spoke of the action of the drug in sympathetic ophthalmitis. He related two cases in which it did very great good. He spoke of his general experience in syphilis. He laid great stress on the preparation of the patient and of the solution, and he preferred to let it run into the veins by gravity and not by a syringe. Mr. Bishop Harman (London) spoke of the cases he had seen, though he had not given it himself. He thought that most of the accidents were due to errors of preparation. On the whole he had been disappointed in interstitial keratitis. He thought that there were certain risks in its administration. Dr. Nimmo Walker (Liverpool) had seen it used in four cases, and was still undecided about its value, and was rather sceptical as to its excellent results. Mr. Inglis Pollock (Glasgow) supported Dr. Walker, and said that although some cases showed no bad results, others did. Mr. A. L. Whitehead (Leeds) gave statistics of cases treated. In acute iritis, salvarsan was of great use, but in interstitial keratitis he had seen no good result. Mr. Jameson Evans (Birmingham) also related his experience. Dr. T. A. Pockley (Sydney) related the case of a patient who recovered his sight and hearing, and lost his paralysis under salvarsan, but the patient shortly afterwards died. Mr. Stephenson replied, and said that no one had brought evidence of damage done by the drug to the optic nerve whether healthy or diseased. Dr.

Inglis Pollock (Glasgow) read a paper on intraocular hæmorrhage, and said that it was the veins which caused the bleeding and not the arteries. Mr. C. Worth (London) related some cases in women. Mr. H. Eales (Birmingham) related a case of recurrent hæmorrhage in the right eye in a patient who was supposed to be a female, but who was subsequently found to be a male. Two hæmorrhages had appeared in the other eye. He thought that these cases were due to vascular abnormalities. Mr. Harrison Butler, Mr. Clegg, and Mr. Batten also spoke. Mr. Bradburn (Southport) read a paper on muscular imbalance and auditory affections; most of these cases were due to labyrinthine disease. Remarks were made by Mr. Worth, Mr. Hill Griffith, and Mr. C. G. Lee. Dr. Bradburn replied. Mr. Jameson Evans demonstrated a photometer, called an optophone.—*British Medical Journal.*

Intra-uterine ophthalmia neonatorum (*Journal Amer. Med. Assoc.*, p. 1285, 1911). Dorland describes a case occurring in his practice. Infection occurred through a premature rupture of membranes. The wife of a medical student was admitted to hospital in first stage of labor. Labor was easy and uneventful. When the nurse attempted to instil silver nitrate into the baby's eyes they were found to be the seat of ophthalmia neonatorum. Large amounts of greenish pus exuded from both eyes, and conjunctivæ were deeply injected. In spite of treatment, one eye perforated the following day, and the other showed almost complete opacity from ulceration. The mother, who passed through a normal convalescence, denied all vaginal douching prior to the birth of the child.

The membranes had ruptured seven days before patient was admitted to hospital.—(*Pacific Medical Journal,* June, 1912.)

Treatment of Conical Cornea. By Claud A. Worth, F.R.C.S. Surgeon to the Royal London Ophthalmic Hospital.

The author described a new operation for conical cornea, remarking that in most cases which needed operation there was a very high degree of myopic astigmatism, sometimes as much as 15 or 20 diopters, with little spherical error, and even with the most accurate combination of correcting lenses, vision was usually very poor. At the apex of the cone there was usually

what looked like an opacity, but examination with oblique illumination and a loupe often showed this appearance to be merely a refraction effect. The majority of surgeons operated upon conical cornea by applying the actual cautery to the apex, with or without complete perforation. Some surgeons say that to operate without perforation is to produce a large opacity and small effect upon the refraction. Those who do not burn a hole completely through the cornea say that the presence for several days of a sloughy fistulous opening into the anterior chamber would be a source of grave danger to the eye. The instruments required for Mr. Worth's operation were a platinum thermocautery and spirit lamp, and a broad needle and spatula for tapping the anterior chamber. The platinum cautery had a flat surface of an elongated oval shape. The eye was cocainized and a drop of eserine instilled. A spot was selected on the cornea in the meridian of greatest curvature, nearly midway between the summit and margin of the cornea—but very slightly nearer the summit. The cautery was heated in the spirit lamp and held over the eye until it almost ceased to glow in daylight. It was then applied to the cornea at the selected spot, with its long axis at right angles to the meridian of greatest curvature. It should only be left in contact with the cornea for an instant; two or three applications were usually required, the cautery being heated each time. A cavity should be made about 4 mm. long and 2 mm. wide, with steep edges, and extending nearly down to Descemet's membrane, but very great care should be taken to avoid opening the anterior chamber. Descemet's membrane appeared to be more resistant to burning than the substance of the cornea, or perhaps the aqueous protected it in the same way as water protected a tin kettle. With care the cauterization could be continued until the membrane was seen bulging at the bottom of the wound. Then the anterior chamber was tapped near its periphery on each of the following three or four days, and after that on alternate days, until the ulcer had healed. The main points of the operation—the dangers of a communication between the wound and the interior of the eye—were avoided; the frequent evacuation of aqueous humor promoted rapid healing of the wound and greatly increased the effect of the operation; by concentrating the effect of the operation chiefly upon one meridian, and so reducing the myopic astigmatism, better visual results were obtained than could otherwise be hoped for; no subsequent iridectomy was required. Mr. Worth said that the operation was so safe and satisfactory that

he would not hesitate to recommend it in a case of non-progressive myopic astigmatism of extremely high degree.—*Medical Press.*

The Work of the Cincinnati Association for the Welfare of the Blind, and Its Attitude Toward the Prevention of Blindness from Venereal Disease. By DR. LOUIS STRICKER, in the *Lancet-Clinic.*

This organization is evidently doing a very energetic and praiseworthy business.

According to Dr. Stricker, investigation has proved that 30 per cent. of blindness is due to venereal disease, 20 per cent. to the infectious diseases, accidents account for 14 per cent., while occupation diseases, particularly workers in lead, arsenic or wood alcohol, are responsible for 4 per cent.

The aims of the society are stated to be:

1. To prevent blindness.
2. To operate a workshop for the blind.
3. To provide for the disposal of the work of blind women.
4. To aid in supervising the education of blind children.
5. To aid the blind to help themselves.

These are surely noble objects. A nurse is employed, and calls for her may be made at any time by individuals or institutions.

From an economic standpoint, what a saving might be brought about to the Province if a strong working committee were formed to supervise or work in conjunction with these smaller organizations. Such societies are bound to do a vast amount of good, for surely nowhere is there shown so much proof of the old saying, "An ounce of prevention is worth a pound of cure."

PRISON AND ASYLUM FARMS

Anyone who visits the Prison Farm at Guelph will know why Hon. W. J. Hanna could not become chairman of the Railway Commission. He has set his hand to a task of singular human interest and significance. It is his work and he must do it. His was the conception as his is the inspiration which gives life and energy to the whole audacious experiment. For in the light of tradition and practice the experiment verges on audacity. The farm now has 290 prisoners. They are engaged in general farming, in industrial operations, in road making and in house building. All of these "farm hands" are of the class that for generations was confined in the Central Prison at Toronto.

For years some of these have known nothing of sustained labor, perhaps little of honest labor. Some came to the farm raw, feeble and flabby. Some were best adapted to clerical work, to the kitchen, to cooking or serving. There are teamsters with as fine horses as can be found in Ontario. These they groom and drive with touching pride and affection. They plow a furrow as straight and true as do the free workmen on the old homesteads. When the day of release comes they leave their horses behind with poignant regret. Gradually muscles are strengthened and sinews toughened, so that few are unequal to a hard day's work. They have good food and plenty of it; they have good beds ranged side by side across a long dormitory through which the air passes freely, with ample provision for washing and tubbing. In short, the conditions under which they live, eat and sleep far excel those which prevail in the average lumber or railway camp, but there could be no greater mistake than to think that the Minister and his associates are inspired solely or chiefly by the ideals of a soft-hearted and soft-headed philanthropy.

The whole farm represents a series of orderly industrial enterprises and a practical experiment in general agriculture. In choosing the farm singular wisdom was displayed. It covers 840 acres and has an inexhaustible supply of stone for building, for lime and for cement, with areas equally adapted to fruit growing, to grain and to stock raising. Costing $110 per acre, it would sell readily at $200 per acre. It is crossed by the Speed and it has a shipping connection with the Grand Trunk and Canadian Pacific Railways. A stone-crushing plant has been installed. Lime kilns are operated. Cement of a high quality is manufactured. A nursery has been established. On an eastward slope 1,600 fruit trees have been planted. There are as fine

cattle, hogs and horses as can be found in the Province. These are of the best breeds and they are kept for the hard profits of practical farming. Indeed, only practical considerations govern throughout the whole institution. There is no thought of an ideal home for prisoners nor of waste of money for display. Nothing is done with the sole object of providing labor for prisoners.

If stone is broken it is put into bridges, into the permanent farm buildings which have to be erected, or shipped to other Provincial institutions for building purposes. There are few finer bridges in the Province than the three-span stone and cement structure across the river, which was built wholly with prison labor. The administration building, now nearing completion, is a handsome and imposing edifice of stone and cement. The two chief dormitories for the permanent housing of the prisoners are solid and graceful structures. A single-story laundry and bath house is one of the unique features of the institution. It is intended that the prisoners at the close of the day's work shall enter by the north door, remove their soiled clothing, have a bath, get a change of clothing and pass out at the south door to supper. The cattle stable, for exterior design and for conveniences of feeding and cleansing, for storage of hay and ensilage, and for the housing of farm implements during the winter, is thought to equal, if not to excel, any similar building on the continent. In the main, all these structures have been reared by prison labor, with material produced from the farm's kilns, quarries and industrial plants, and under direction of the permanent staff of the institution. It is further designed that the nursery shall produce trees for planting, that the stock shall produce pork and beef for the farm population and for the inmates of the Provincial hospitals, and that the fields shall yield grain, fruit and vegetables for the farm and the other Provincial institutions. Work has also begun upon a series of roads, branching out from a broad curving avenue which will begin at Guelph and sweep up to the administration building.

There is method and consistency in the whole project and purpose in every detail. At the outset Mr. Hanna planned for a completed undertaking. He had two objects: (1) to re-establish prisoners in self-respect and habits of industry; (2) to make their labor productive and to give the Province interest upon its investment. Debarred from seeking an outside market for the products of the farm and the output of its industrial plants, he saw a market in the public institutions. He saw that food could be produced for the prisoners themselves and for the inmates of

the Provincial Asylums, that the prison labor could be employed in farming, in building, in cutting stone and making cement. He saw that the cost of maintaining the institutions could be reduced and a direct saving to the Province effected.

There were days of doubt and, for all we know, days of danger. He was slow, cautious and reserved in his attitude towards the press and the public. He began with a handful of prisoners. The effect upon these of freedom and outdoor labor was studied with anxious concern. Gradually new groups were added and the scale of operations extended. Finally, as has been said, nearly 300 prisoners are employed in various vocations, and they range freely over nearly 1,000 acres of farm land. In the main they are in charge of prison foremen and the way of escape lies open. But at the noon hour they come in many straggling groups from every direction, take their meal, their hour of rest, go back to work, and return at nightfall as freemen drift home from the fields and the factories. No one knows what temptations they resist or how pleasant seems the country far away. It is enough that they return, that generally they labor with diligence, that they make no mischief nor organize any conspiracies. Few are sullen, and few ungrateful. They are trusted and they endeavor to deserve the freedom they are permitted to enjoy.

Only a week or two ago a prisoner sought an interview with one of the officials and pleaded to be sent back to the Central Prison at Toronto. He declared that the impulse to escape had become irresistible. He had done his best to resist the temptation. He knew that he would be recaptured and his sentence probably extended, but go he must if he was allowed to have another day of freedom. He was sent back to the Central. There are coarse faces and repulsive faces in the three hundred, as there are weak faces and the soft cheeks and smiling eyes of youths. There are those who have deliberately warred against society and will do so again. There are those who have been lured into crime or blundered into wrongdoing and bear the shamed faces which mean a long repentance and an enduring sorrow.

Generally prisoners who are placed in positions of trust deserve the confidence which they receive and co-operate zealously in the tasks in which they are engaged. Here, perhaps, is the secret of it all, for trust begets trust, as prison walls stimulate the passion for freedom. Yet it is too much to believe that offenders against society ever will voluntarily expiate their offences. But could the experiment at Guelph succeed if there was not a genuine desire in the breasts of many of the prisoners for honest living and permanent release from evil surroundings?

In proof of this is the fact that not a few of those whose sentences have expired in recent weeks have had the officials procure them tickets for the Western wheat fields with the $2 a month they are allowed during their period of labor on the farm. It becomes clear also that the attitude of society, influenced by what has been accomplished at Guelph and elsewhere, becomes more tolerant towards offenders and increasingly reluctant to close the doors of trust and mercy forever upon those who have once come under sentence for wrongdoing.

In the permanent dormitories now approaching completion it is intended to have three grades of prisoners. There will be private rooms for say 20 per cent. who by good conduct and good service deserve exceptional consideration, apartments accommodating from 15 to 20 prisoners for the second order and cells for probably 15 per cent. who remain untrustworthy and intractable. Mr. Hanna and his associates are not so visionary as to assume that vigilance can be wholly relaxed, that necessity for discipline never will arise, or that all bars from doors and windows can be removed. In so far, however, as a rational regard for security will permit, all that suggests the gloom, the shame and the repression of a prison will be excluded and honest living and honest labor rewarded with confidence, sympathy and companionship.

The reforming energy and practical statesmanship of Mr. Hanna is by no means centred wholly in the Prison Farm at Guelph. A farm has been secured near Fort William, where fifty prisoners under sentence for misdemeanors are chopping down the forest and clearing fields for occupation. They clear from four to five acres a day, and, although they only began in June last, by winter they will have cleared 200 acres and will have provided housing accommodation for themselves, have erected stables for cows and horses, and have grown and dug two or three hundred bushels of potatoes. As at Guelph, the prisoners are good, steady workmen, while the whole staff consists only of the superintendent and three assistants. Chopping will continue through the winter. Probably by next summer 600 acres will be cleared. Four hundred acres adjoining the land on which the prisoners are now employed has been withdrawn from settlement, so that in a few years the Government will have 1,000 acres ready for occupation. It is the intention to offer this land to settlers as improved property, and there is hardly any doubt that it will sell for $100 an acre. Incidentally, agriculture in the neighborhood will be stimulated. There is still much unoccupied land around Fort William and Port Arthur, with a greedy local market that now has to be fed from outside. If the experiment

proves to be as successful as the indications suggest, other land will be secured elsewhere and the use of prison labor for chopping and clearing in the north country become the settled practice of the Department.

In the management of the hospitals for mental diseases Mr. Hanna has been as progressive and as practical as in the conduct of the prisons. From the asylums all the old machinery for binding and shackling has been removed. The keepers have been replaced by nurses, trained in the institutions and with qualifications equal to those engaged in the regular hospitals. The whole attitude towards mental disease is that of nurses and physicians towards bodily disease. Each case is treated separately and the results tabulated for the advantage of the whole body of nurses and physicians in the institutions and for the benefit of medical science. Every consideration of party patronage has been eliminated and only efficiency is regarded in promotions and appointments. The whole result is that probably Ontario is now in advance of any other community in the world in the treatment of mental disease, as it is at least abreast of any other state in practical and wholesome prison reform. Moreover, a system of accounting has been introduced in all the public institutions which makes each a check upon the other, which assures the immediate detection of waste and extravagance, and makes instantly available for the officials, for the Legislature and for the public the history of every inmate and the details of every transaction.

The farms connected with the asylums are now under the direction of a graduate of the Ontario Agricultural College, so that, as at the Prison Farm at Guelph, the very best results may be obtained in yield of milk, of fruit, of pork, of vegetables and of grain through wise selection of seed and stock and the best use of the land available for cultivation. When the new hospitals at Whitby are completed, where Mr. Hanna, in constant fidelity to his practical ideals, is laying the foundations with prison labor and where much of the stone and cement for building will be drawn from the farm at Guelph, we shall have a still clearer demonstration of his singular devotion to public duty, his infinite concern for the afflicted, his rare courage and his resolute individuality and originality.—*The Toronto News.*

Editorials.

THE CANADIAN PUBLIC HEALTH ASSOCIATION

Although this Association is not yet one year old, it has become a large and powerful organization. As we intimated last year a Canadian Health Association would have been organized many years ago if there had been no American Health Association. This Association, organized in the United States, had become really the North American Health Association. The kindness of our neighbors to Canadians in asking them to join, and their generous treatment of them after they became members made such a pleasant and healthy atmosphere, and the annual meetings were so ably managed that for a long time we in Canada were more than satisfied with the admirable work done by that Association.

Some time early in the year 1911 a number of physicians and others interested in health affairs met in Ottawa, and started the organization of a Canadian Association. The first meeting in Montreal was a marvellous success. H. R. H. the Duke of Connaught, took a great interest in the meeting and delivered a remarkably good address. Hon. Mr. Borden, the Premier of Canada, told the audience that he did not think the Federal Government had in the past done enough in the direction of the improvement of public health.

Toronto was chosen as the place for the next meeting. It was thought by many that Dr. Hastings or Dr. McCullough should be the President, because a local man is in the best position to guide the preparations for the meeting. Dr. Charles Hodgetts,

formerly of Toronto, now of Ottawa, was, however, chosen; and when his name was mentioned it was accepted with universal satisfaction and approval. A strong local Committee of Arrangements was elected, and we must say its members have done magnificent work. Special credit is due to Drs. Hastings, McCullough, Helen MacMurchy, Anderson and Webster, and to Mrs. Huestis and Mr. Aird Murray.

We have not sufficient space to comment fully on the numerous admirable features of the meeting. We wrote in glowing terms concerning the great meeting in Montreal last December. We hoped the meeting in Toronto would be nearly as good. However, now that the meeting is a thing of the past, we have pleasure of expressing the opinion that the second Congress of this great Association was quite as successful as the first. It is really hard to compare the two, because in certain particulars where the one was a bit weak the other was very strong.

It is difficult for one person to have any adequate conception of the great work done in the seven different sections. The officers in these sections worked most assiduously in their endeavors to attain success. The sections which drew the largest numbers were the "Medical Officers of Health" and the "Social Workers" under the chairmanship of Dr. Roberts and Dr. Helen MacMurchy respectively. Great good will surely follow the interesting work done previous to, and during, the meeting. It is too often forgotten while a meeting is running along quietly and smoothly that the success, so evident to all, is due largely, if not entirely, to the hard work done by the officers for months before the fruits of their work comes into evidence. We extend our

hearty congratulation to Dr. MacMurchy and Dr. Roberts on the happy results of their good work.

THE FUNCTION OF THE COLON

Physiologists have long debated the use of the large intestine and have come to conclusions as wide apart as the poles. Some there were who thought it no more than a reservoir to store the detritus of digestion till it should be expelled from the organism. Others maintained, because of the presence of the appendix and the bacterial medium which it poured out, that the colon was the chief organ of bacterial digestion. But the use of the X-ray, and the investigations of Folin in regard to digestion in this part of the intestinal canal prove that the functions are chiefly mechanical, viz., storage and periodic expulsion of waste.

Cannon reported in 1902 that he had observed antiperistalsis in the ascending colon of a kitten. Since that time, many others have confirmed his results, and the weight of opinion is that the same thing takes place in man, with consequent thorough mixing of the food, followed with some digestion and absorption. But it must not be forgotten that, under normal conditions, fully 9/10 of the digested food is absorbed in the small intestine.

Past the hepatic flexure, the colonic contents have lost most of their moisture, and are, in consequence, firm and formed. The onward movements here are of two kinds, either in comparatively large masses, or in small portions, which become separated from the rest and are carried directly to the rectum by slow peristaltic movements. When defecation takes place,

the entire colon, as far as the splenic flexure, is emptied, in the average man, but Schwartz (Vienna) had many X-ray tracings showing both descending and transverse portions entirely clear after one act.

These X-ray studies proved also that massage of the abdomen in any direction, as long as it was deep, could produce peristalsis of the great bowel, and so we have now a scientific basis for a therapeutic measure long used in constipation.

F. A. C.

THE WELLESLEY HOSPITAL

The Wellesley Hospital was formally opened by His Royal Highness the Duke of Connaught, August 26th. It will be devoted exclusively to the care of paying patients. The building has been erected on the "Homewood" property at the head of Homewood Avenue. It contains three acres of land. Accommodation has been provided for about sixty patients. There is no regular visiting staff, as each patient will be attended by his or her own physician or surgeon. The hospital is open to all physicians in good standing, and surgeons who confine their practice to surgery. There are two resident house surgeons, and a staff of nurses, who will work under the supervision of Miss Flaws, the Lady Superintendent.

THE BRITISH MEDICAL ASSOCIATION

The meeting of this Association will be held in Brighton in 1913 under the Presidency of Dr. Ainslie Hollis. The President-elect said it was about

twenty-six years since the Association met at Brighton.

Dr. Barrett, of Melbourne, extended a formal invitation to the members to go to New Zealand in the year 1914. The tenth session of the Australasian Congress will be held at Auckland, New Zealand, in February, 1914, and it is the desire of the President-elect of that Congress to induce as many members of the British Medical Association as possible to meet their brother Australian practitioners. He hoped that many would meet them for two purposes. In the first place, that they might have an opportunity of interchange of professional views and of reciprocating some of the kind hospitality they all experienced when they came to Great Britain. In the second place, the visit would have the effect of helping some of their brother practitioners to a more extended knowledge of the empire.

Dr. F. A. Pockley (New South Wales) cordially supported the invitation. The sessions of the Australasian Congress were held in either one or other of the Australian States or in the Dominion of New Zealand. He could assure the members that if they honored them with their presence they would receive a very cordial welcome and have a very good time.

Dr. Todd (Adelaide) supported the invitation. If any members visited Adelaide the profession would be delighted to do all it could to make the visit a profitable and pleasurable one.

NEWS ITEM.

Canadian Public Health Association

Dr. J. W. S. McCullough, Chief Health Officer of Ontario, succeeds Dr. C. A. Hodgetts as President of the Canadian Public Health Association, and the next meeting of the organization takes place in Regina. Major Lorne Drum, of Ottawa, was re-elected secretary.

THE OFFICERS.

These are the officers of the association: Honorary Patron—His Royal Highness the Duke of Connaught. Vice-Patrons—Lord Strathcona, Right Hon. R. L. Borden. Honorary President—The Premier of Saskatchewan. Honorary Vice-Presidents—Hon. Clifford Sifton, Hon. F. D. Monk, Hon. Sam Hughes, Hon. Martin Burrill, Hon. J. D. Hazen, Sir James Whitney, Hon Walter Scott, Hon C. W. Murray, Sir Richard McBride, Sir Rodmond Roblin, Hon. H. K. Flemming, Sir Lomer Gouin, Hon. A. L. Sifton, Sir Willam VanHorne. President—Dr. J. W. S. McCullough. Vice-Presidents—Dr. A. J. Douglas, Winnipeg; Dr C. J. Hastings, Dr. Helen MacMurchy, Dr. J. D. Page, Dr. T. H. Whitelaw, T. Aird Murray. Secretary—Major Lorne Drum. Treasurer—Dr. George D. Porter, Toronto, and a numerous Executive Council.

The Executive Committee is as follows: Dr. J. W. S. McCullough, President; Major Lorne Drum, D. G. D. Porter, Dr. John Amyot, Col. G. C. Jones and Dr. C. A. Hodgetts.

First International Congress of Comparative Pathology to be held at the Faculty of Medicine of Paris from 17th to 23rd October, 1912

The principal subjects are as follows:

Tuberculosis—Prof. Calmette, Prof. Vallee, M. Chaussee.

Human and Aviary Diphtéry—Prof. Arloing, Prof. Rappin.

Cancer—Prof. Menetrier and Dr. Clunet, Prof. Borrel.

Smallpox and Vaccination—Director Chaumier, MM. Carriere and Tomarkin (of Geneva).

Parasites Peculiar Both to Men and Animals—M. Weinberg, Prof. Deve, Prof. Bodin, M. Ch. Morot, Prof. Perroncito.

Nervous Affections—Dr. Marchand and Prof. Petit.

Hydrophobia—Dr. Delaunay, Dr. Remlinger, Prof. Babes.

Comparative Study of Cirrhoses—Dr. M. Garnier, Dr. Ravenna.
Pathology of Inferior Animals—Prof. Perroncito.
Milk—Prof. Porcher, Dr. Henri de Rothschild.
International Organization of the Struggle against Foot and Mouth Disease—Prof. Moussu.
International Organization of the Struggle Against Melitococcy —M. Ch. Dubois.
Vegetable Pathology—M. Louis Blaringhem, Dr. O. Larcher, M. Louis Dop (of Roma).
Various communications.

All the correspondence to be addressed to General Secretary, 42 rue de Villejust, Paris, France.

Professor Dr. H. Strauss, of Berlin, will lecture at the New York Post-Graduate Medical School and Hospital, Second Ave. and Twentieth St., on October 12th, 14th and 15th, on the Diseases of the Stomach and Kidney. Professor Dr. Carl von Noorden, Physician-in-Chief to the City Hospital, Frankfort, Germany, will also deliver a series of lectures on the Pathology and Treatment of Diabetes, Radium Therapy and Arteriosclerosis at the same place, on October 28th to October 31st inclusive.

Post-Graduate Work at the Congress

A special meeting for the discussion of post-graduate study in medicine will be held during the sessions of the International Congress of Medicine in London next year under the auspices of the International Committee for Post-Graduate Medical Education. The programme of the meeting includes papers dealing with special and general aspects of post-graduate study. A feature will be the reports on the collective researches instituted by the committee into the conditions and nature of medical study in all civilized countries. Three special subjects or themes have been selected for debate and report. These are (1) present methods of university education in medicine, with reference to the diversities among and the legal status of various degrees and curricula; (2) social medicine as a special subject for the curriculum; and (3) general suggestions for reform and improvement of the courses, both for post-graduates and for ordinary medical students. The International Committee has worked

hard and patiently since its constitution, and we understand that the reports are full and clear, so that they will be of far greater general interest than the somewhat one-sided reviews, such as the Flexner memorandum. By the way, the committee has not yet found a successor to the late Dr. Pavy, one of the English representatives. The English members of the committee are appointed, we believe, by the Secretary of State for Foreign Affairs, and none of them (as we pointed out at the time when the first appointments were made) can be said to be authorities on the subject of graduate study. It is to be hoped that next year's Congress will see some effort made to put these appointments in the hands of either the General Medical Council or the responsible colleges, with due regard to the post-graduate institutions that are already doing such good work in this country.—*The Hospital.*

Personals

Dr. Wm. Arrell has removed from Dunnville to Hamilton.

Dr. H. W. Nancekivel has removed from Ingersoll to Foxbury, Sask.

Dr. E. W. Spragge, of Toronto, sailed for England September 14th.

Dr. George Elliott has moved from 203 Beverley Street to 219 Spadina Road, just south of Dupont.

Dr. G. Sterling Ryerson, of Toronto, returned from his holidays on the Kawartha Lakes, August 26th.

Dr. Colin Campbell, of Toronto, returned after a three months' trip on the Continent, August 25th.

Dr. Herbert J. Hamilton, of Toronto, after a visit to England, returned by the Empress of Ireland, reaching Quebec August 30th.

Dr. Walter McKeown, of Toronto, is away on a two months' trip. He left home September 13th, and expects to spend some weeks in Germany.

Dr. A. E. Malloch, of Hamilton, has recovered from his recent illness, and went to Scotland to recuperate. He will probably return in the latter part of October.

Dr. Montizambert, of Ottawa, after attending the meeting of the Canadian Association at Edmonton, went on to the coast on his annual tour of inspection, and returned to Ottawa September 13th.

The practice carried on heretofore by Drs. Oldright and MacKenzie, corner Carlton and Homewood Avenue, will be continued by Dr. MacKenzie. Dr. Oldright will in future confine himself to practice in consultation.

Book Reviews

Pharmacology and Therapeutics for Students and Practitioners of Medicine. By Horatio C. Wood, Jr., M.D., Professor of Pharmacology and Therapeutics in the Medico-Chirurgical College; Physician to the Medico-Chirurgical Hospital; 2nd Vice-Chairman of the Committee of Revision of the U. S. Pharmacopœia. Philadelphia and London: J. B. Lippincott Company.

Impressed with the importance of emphasizing the practical therapeutic side in the teaching of pharmacology, the author has arranged a book which in many respects is an excellent one for students. He lays stress on the fact that pharmacology by itself has little to interest the medical student. If, however, the proper correlation of this science to therapeutics can be shown and taught, the physician is then able to exhibit the various drug-stuffs in a manner which should prove of distinct advantage to his patient.

After a general introductory chapter, the drugs are taken up in the following arrangement: Drugs affecting secretion; those acting on the nervous system, circulation, alimentary tract, metabolism; drugs acting on the cause of disease, such as anthelmintics and disinfectants; and extraneous remedies, as demulcents, counter-irritants, etc. To each chapter is appended a bibliography, so that one can easily look up the literature if one wishes to.

One point that appeals to us particularly is that definite statements are made as to the actions of a drug. To a student, there is nothing more confusing than to be told that one man says one thing, another something else, and he is left to himself to believe whichever he chooses. Altogether, we consider this an excellent book for what it purposes to be. The gap between the sciences and clinical medicine needs to be lessened. A book such as this tends to reconcile the two factions. We predict that it will meet with the approval of the general profession.

A Practical Text-Book of the Diseases of Women. By Arthur H. N. Lewers, M.D., F.R.C.P., Lond., Senior Obstetric Physician to the London Hospital, etc. Seventh edition, with illustrations, colored plates, and illustrative cases. London: H. K. Lewis, 136 Gower Street, W.C.

This is one of the most popular text-books of Diseases of

Women in the world. It is very practical in character. The opinions expressed and the methods recommended by the author are based on a long experience in this great London Hospital. Most Canadians know that the opportunities of acquiring clinical experience in that institution are exceptionally large. The author elaborates every subject from a clinical point of view. His style of writing is so clear that one has no difficulty in understanding what he means. We think that it is in all respects for the student, the general practitioner, and also the specialist in diseases of women, one of the best books we have seen.

Progressive Medicine. A quarterly digest of advances, discoveries and improvements in the medical and surgical sciences. Edited by HOBART AMORY HARE, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College, Philadelphia; assisted by LEIGHTON F. APPLEMAN, M.D., Instructor in Therapeutics, Jefferson Medical College. June 1, 1912. Lea & Febiger, Philadelphia and New York. $6.00 per annum.

The contents of this volume are: "Hernia," by Coley; "Surgery of the Abdomen," J. C. A. Geister; "Gynæcology," Jno. G. Clark; "Diseases of the Blood, Diathetic and Metabolic Diseases, Diseases of the Thyroid Gland, Nutrition and the Lymphatic System," by Stengel; "Ophthalmology," by Edward Jackson.

As usual, this excellent work contains everything of the year's work that is worth knowing, and the conclusions are drawn by men eminent in their special departments. There is no other work in English so valuable to a physician who desires to be abreast of the times. Everything is concisely told, and yet the articles quoted lose nothing by the condensation. We have nothing else we value so much on the library desk.

Insomnia; Its Causes and Treatment. By SIR JAMES SAWYER, of London, F.R.C.P., Consulting Physician to the Queen's Hospital, Birmingham. Second edition, with many revisions and additions. Birmingham: Cornish Bros. 1912.

This little monograph consists of the first three chapters of the author's "Contributions to Practical Medicine," 1912 edition. Much light is thrown upon a problem often so perplexing in its etiology and successful treatment. The writer

The Doctor

in his unselfish work for others, often fails to apply for his own benefit, the valuable knowledge he continually renders, in service, to his patients.

Caffeine—the drug in coffee and tea—is as harmful to the Doctor himself, as to others.

If habitual coffee and tea drinking cause various aches and pains —insomnia—precordial oppression—nervous irritability, etc., in your patients, why not the same unpleasant action of this drug in your own case, Doctor?

Postum, made of clean hard wheat, including the bran-coat with its natural content of the valuable "wheat phosphates," has become a real boon—not only to thousands of former sufferers from "caffeine-poisoning," among the laity, but to the Doctor himself.

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has evidently observed well his cases of this affection, and throws out many little suggestions which may prove of great service. The last chapter, on treatment, is taken from the writer's contribution to the well-known work, "An Index of Treatment, by Many Writers," and furnishes an excellent working basis for the treatment of this occasionally so intractable condition.

Sexual Impotence. By Victor G. Vecki, M.D., Consulting Genito-Urinary Surgeon to the Mount Zion Hospital, San Francisco. Fourth edition, enlarged. 12mo. of 394 pages. Philadelphia and London: W. B. Saunders Company. 1912. Cloth, $2.25 net. Sole Canadian Agents, The J. F. Hartz Co., Ltd., Toronto.

The appearance of the fourth edition of this work testifies to the favorable reception it has received. There is no doubt that the great importance that a proper sexual life plays in human happiness has only become well recognized within the past few years, and for a proper understanding of such matters, books like the one before us are necessary. The many etiological factors entering into the condition of impotence are taken up in detail, and treatment proper to the conditions outlined. While in some cases expert knowledge may be necessary, still, in the main, the book is one for the general practitioner, and to such we can cordially commend its careful study. Much that is new will be found, and its careful application in practice should redound to the credit of the painstaking physician.

The Universal Medical Record. Vol. I. January-June, 1912. 576 pages. Bound in buckram and fully indexed. London: 36-38 Whitefriars Street, E.C.

The wide field covered by this journal is evidenced by a study of the Index to Volume I. What is best in the medical literature of the world is synopsized and arranged in such a way that any given article can be readily looked up. The physician will find here an "Index Medicus" which will be invaluable to him.

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See how admirably the Silent Waverley Electric Brougham fills the requirements of the City Doctor:—

IT TAKES the road immediately (no cranking), and is always ready for an emergency call.
IT STARTS and stops with the slight movement of a controller, no soiling or fatiguing of the hands and arms.
IT CANNOT freeze up, no matter how cold the day.
IT IS NOISELESS, odorless and most economical to operate.
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The Silent Waverley Electric Four-passenger Brougham has the longest interior of any car of its type, 65 inches. It has two full-width seats, generously upholstered.

It is interesting to note that the makers of this car, the Waverley Company of Indianapolis, have had sixteen seasons of electric carriage building, and the 1912 car is the product of the accumulated experience of these years.

See the Waverley at the Garage, Albert Street, or write for particulars.

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BOOKS RECEIVED

Elements of Practical Medicine. By A. H. CARTER, M.D., M.Sc., Professor of Medicine, University of Birmingham. Tenth edition London: H. K. Lewis, 136 Gower Street, W.C. 1912.

Lessons on Massage. By MARGARET D. PALMER, formerly Masseuse and Manager of the Massage Department of the London Hospital. Fourth edition. London: Bailliere, Tindall and Cox, 8 Henrietta Street, Covent Garden. 1912.

The Practice of Medicine; A Manual for Students and Practitioners. By HUGHES DAYTON, M.D., formerly of the Cornell University Medical School, New York. New (2nd) edition, thoroughly revised; 12mo., 326 pages. Cloth, $1.00 net. The Medical Epitome Series. Lea & Febiger, publishers, Philadelphia and New York. 1912.

Progressive Medicine; a Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College, Philadephia. Assisted by LEIGHTON F. APPLEMAN, M.D., Instructor in Therapeutics, Jefferson Medical College, Philadelphia. Vol. XIV., No. 3. September 1, 1912 Lea & Febiger, Philadelphia and New York.

Proceedings of the Royal Society of Medicine. Vol V., No. 8. June, 1912. Longmans, Green & Co., 39 Paternoster Row, London; New York, Calcutta, Bombay. All rights reserved.

An Essay on Hasheesh, Including Observations and Experiments. By VICTOR ROBINSON, Contributing Editor *Medical Review of Reviews;* Pharmaceutical Chemist, Columbia University. *Medical Review of Reviews,* 206 Broadway, New York. 1912. Price, fifty cents, post-paid.

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Miscellaneous.

Some Valuable Products for the Treatment of Diseases of Bacterial Origin

Since the advent of diphtheria antitoxin it is doubtful if any new remedial agent has elicited greater interest than is now being manifested in the bacterial derivatives known as Phylacogens. These products were originated by Dr. A. F. Schafer, of California, the method of preparation and technique of application being first presented to the San Joaquin Medical Society in Fresno. To the uninitiated it may be said that the term Phylacogen (pronounced phy-LAC-o-gen) means "phylaxin producer," being derived from two Greek words signifying "a guard" and "to produce." The Phylacogens are sterile aqueous solutions of metabolic substances, generated by bacteria grown in artificial media. They are produced from a large variety of pathogenic bacteria, such as the several staphylococci, streptococcus pyogenes, bacillus pyocyaneus, diplococcus pneumoniæ, bacillus typhosus, bacillus coli communis, streptococcus rheumaticus, streptococcus erysipelatis, etc.

Four Phylacogens are now offered to the medical profession: Mixed Infection Phylacogen (used in the treatment of bacterial diseases of unknown etiology), Rheumatism Phylacogen, Erysipelas Phylacogen, and Gonorrhœa Phylacogen. They have been thoroughly tested clinically, and are said to be producing excellent results in the treatment of the various pathological conditions in which they are indicated. They are administered hypodermically—subcutaneously or intravenously—preferably by the former method, the latter being advised only in cases in which a quick result is demanded. They are supplied in hermetically sealed glass vials of 10 cc. capacity.

The Phylacogens are prepared and marketed by Parke, Davis & Co., who have recently issued a 24-page pamphlet which describes them in detail—the process of manufacture, therapeutic indications, dosage, methods of administration—everything, in fact, that needs to be known by the man who desires to use Phylacogens. Every physician in general practice, every practitioner who desires to keep abreast of the latest advances in bacterial therapy, should have a copy of this valuable booklet. Write to Parke, Davis & Co., at their offices in Walkerville, Ont.; ask for the "Phylacogen pamphlet," and mention this journal.

"that the ice bag is distinctly harmful in appendicitis and should never be used," is the logical deduction of Dr. A. M. Fauntleroy, Surgeon U.S. Navy, basing his opinion upon seventy cases operated.

Like morphine, ice not only obscures the true condition, but decreases Hyperemia, Leucocytosis and encourages stasis in the part to which it is applied. What seems evident in applying ice in inflammation of the appendix must hold true in inflammatory processes where elsewhere manifested.

That hot moist heat is the logical therapeutic agent in treating inflammation must be apparent, as it increases Hyperemia, Leucocytosis and reduces stasis in the part to which it is applied.

The convincing evidence of the convenience, serviceability and above all the reliability of

antiphlogistine as a thermic agent in the treatment of inflammation is best appreciable by its application thick and hot to the affected part.

We wish again to remind our readers that at any time they desire to sell their medical practices that the Canadian Medical Exchange, 75 Yonge Street, Toronto, in charge of Dr. Hamill, Medical Broker, offers them every facility for so doing, with a maximum of speed and minimum of publicity. His methods are sure to commend themselves to anyone who takes the trouble to investigate, and he would be pleased to send to anybody interested many letters of recommendation from many physicians whose practices he has sold during the last sixteen years. Dr. Hamill informs us that this is about the best time of year to effect a sale.

The After Care of Children's Ills

With the advent of schooldays and the daily association of many children in the class room, the contagious diseases of childhood develop and multiply. The exanthemata, as well as diphtheria, whooping cough, etc., comprise a considerable proportion of the diseases that the family physician is called upon to treat during the late fall and winter months. The robust child, with but a mild infection, frequently recovers quickly and, perhaps, requires but little attention during the convalescent period, while the child whose general nutrition is "below par" usually emerges from the acute attack with a condition of anæmia and general vital depreciation. In the large majority of cases, it is undoubtedly wise to encourage and hasten convalescence by means of a palatable and efficient hematinic and general tonic. For this purpose Pepto-Mangan (Gude) is especially valuable. All children like it and take it readily; it does not irritate the digestive organs, but, to the contrary, increases the appetite and assists in the absorption and assimilation of the child's nourishment. As it is non-astringent, it does not, as other ferruginous remedies do, cause or increase constipation. As Pepto-Mangan is prompt and efficient as a blood builder and general reconstructive, it should be preferred among children whenever medication of a general tonic nature is indicated.

The Denver Chemical Mfg. Co., manufacturers of Antiphlogistine, are to be congratulated on securing the services of Mr. Harold B. Scott as manager of the company, to succeed J. C. Bradley, who is retiring from that position.

Mr. Scott is a bright, energetic young man, a graduate of

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For Infants, Growing Children and Invalids—The Standard Infant's Food for over 80 years in Great Britain

Sir Charles A. Cameron, C.B., M.D. Professor of Chemistry, R.C.S.I., Medical Officer of Health for Dublin, City and County Analyst:

"This is an excellent Food, admirably adapted to the wants of infants and young persons, and being rich in phosphates and potash, is one of the greatest utility in supplying the bone-forming and other indispensable elements of food. Although peculiarly adapted to the wants of the young, this Food may be used with advantage by persons of all ages."

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"Characterized by an excellent, rich proportion of nitrogenous Food substances and of valuable mineral ingredients."

Relieves Infantile Constipation.

Sold in air exhausted tins at all Druggists.

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Starchless—For very Young Babies

A new preparation with a function quite distinct from the renowned Neave's Food for Infants. Has been introduced for those requiring a Milk Food **absolutely free from starch**, for very young babies. It may be given in conjunction with the breast, if the mother's supply is scanty or poor in quality, without the child being sick afterwards. It is instantly made by simply adding hot water. Neave's Milk Food should be followed by the ordinary Neave's Food for Infants directly it becomes advisable for the child to take something besides milk.

Report of Public Health Laboratories, London Hospital, Medical College, London, Eng.:

"This food contains in each 100 parts:—Fat, 26.0; Proteids, 20.0; Lactose, 47.1; Ash, 4.5 (of which 5 per cent. is phosphoric acid); Moisture, 2.4=100.0. When diluted with 7 to 8 parts of water the mixture would closely resemble human milk in composition. The fat would then be about 3 per cent. This is very satisfactory."

An M.D., M.R.C.P., London, Eng., writes:
"Have prescribed your Milk Food frequently . . easily digested . . without any after acidity, which is common with Foods containing alkaline elements, and I shall recommend it further."

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Yale University with the degree of A.B. Upon his graduation from college he entered the commercial world, where he has enjoyed a wide, varied and successful experience in developing one of the great industries of our country. He is peculiarly well fitted for the management of a proprietary house, and his connection with Antiphlogistine will doubtless lead The Denver Chemical Mfg. Co. to spell success with larger letters than ever before.

Anaemia and Tissue Waste

Tissue waste, which is secondary to depletion of the system by interference with tissue repair, is often very persistent for the reason that it is not accorded systematic treatment. The failure to correct anæmia and tissue waste is a serious mistake. The practitioner's duties are by no means over when the acute disease has spent its force. In fact, the physician should regard it as a routine duty to institute such treatment, at the conclusion of an acute disease, as will look to the correction of anæmia and the repair of depleted tissues. Such a course changes the results remarkably—and, of course, insures the patient against many subsequent untoward results which accrue from the lowering of the resisting powers of the economy.

In treating anæmia and tissue waste Bovinine is of great value. This agent is a pure tissue food and contains all the nutritive elements. It contains true animal iron, which is incomparably superior to any of the inorganic preparations that can be found. It should be given in increasing dosage and continued until there is no longer any clinical evidence of anæmia, and until the former state of the tissues, as regards the matter of waste, has been restored.

The Doctor's Bill

For treating a case of pneumonia, typhoid, appendicitis or childbirth, a physician is entitled to reasonable compensation depending on the time devoted to the patient, the prevailing standard of fees in the community and the physician's personal valuation of his own services. It is unwise and unnecessary to itemize the bill further than stating the date and nature of the service rendered. It is, or rather it has been, our great mistake that we permitted the public to imagine that the doctor's bill

Three Valuable Qualities
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BOVRIL

1. It possesses remarkable feeding power.
2. It enables the system to extract more nutriment from ordinary diet than without its use.
3. These two qualities give Bovril a body building power of from 10 to 20 times the amount of Bovril consumed.

See "British Medical Journal," Sept. 16th, 1911.

MARVEL "WHIRLING SPRAY" SYRINGE

The latest and best syringe ever invented to thoroughly cleanse the Vagina

THE MARVEL,

by reason of its peculiar construction, dilates and flushes the vaginal passage with a volume of whirling fluid, which smoothes out the folds and permits the injection to come in contact with its entire surface instantly dissolving and washing out all secretions and discharges.

Physicians should recommend the Marvel syringe in all cases of Leucorrhoea, Vaginitis, and all Womb Troubles, as it is warranted to give entire satisfaction.

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is a mere matter of so many visits at so much per visit. Of course, every practitioner now makes a clinical record of the findings at each visit, dressing or office consultation, at the time it occurs, but this record should be separate from the memorandum of account. A physician who cannot obtain a settlement of his accounts on a basis other than the antediluvian itemized bill of visits, medicine, et cetera, has a clientele that needs educating.

Whether the bill should be rendered monthly, annually or immediately is a question each must answer for himself. The deplorable customs of our fathers in this respect are no criterion for the physician to follow to-day. Being largely guessers, our forefathers had too much of that false modesty, wherefore they were ashamed to take the money; and besides, their competition was inconsiderable as compared to present practice. Our work is largely scientific, exact, and only in small part guesswork; therefore we should not be ashamed to take the money. If one operates on a man, and he recovers, the psychological moment to render the bill is when he sits up and takes house diet; if he dies, the psychological moment to render the bill is the day after the funeral, if not sooner. If one treats a case of gonorrhœa, there should be no bill to render.

The public labors under the impression that "doctors earn their money easily and earn lots of it," and we, by our false modesty, bluff, front and efforts to look more prosperous than our business warrants, are fondly fostering this wrong impression, to the injury of our calling. Not all of us who ride in automobiles could not cover our work via shoe-leather or bicycle or trolley. Some of us kill good business by small business. A few of us hypocritically pretend to be too busy to make out bills! Every mother's son of us is a hypocrite in a business way.

What would we think of the clothier, the butcher or the grocer who would render a bill for, say sixty dollars, and when payment was offered six months later, throw off ten, twenty or thirty per cent. of the amount? How do we look upon the statement that comes with this apology printed at the top. Statements rendered monthly; this is not a demand for settlement. What is it, then, a letter of condolence? If not a demand for settlement we should thrust it aside until the creditor wants his money; it's bad business to pay bills before they are due. A doctor who employs this apologetic phrase on his bills needs some post-graduate study. The trouble is, we forget what we are charging for. The words professional services do not signify

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The Effects of Soaps upon the Skin

The varying susceptibility of the skin to the action of different kinds of soap has long been a matter of interest to the dermatologist. The question is constantly asked by patients, "Which is the best soap for me to use?" and it is sometimes difficult to give the correct answer. Soaps differ widely in their chemical composition, as well as in their price, and cases constantly occur in which the evil effects of an unsuitable soap are manifest upon the skin. As the result of an analytical inquiry into the composition and action of a large number of soaps, recently carried out by Dr. F. Gardiner (*Edinburgh Medical Journal,* June, 1912), it appears most probable that the bad effects are mainly due to those varieties made from the cheaper fats, and especially from cocoanut and cotton-seed oils. Soaps that are meant for washing clothes and for scrubbing are seldom suitable for toilet purposes. The results of this research may be summarized as follows: All soaps, from their chemical composition, must be irritant to the human skin, but the effect varies with different individuals, being more marked in the senile and in diseased skins. Rancid fats and cotton-seed oil are the worst offenders in this respect. Soaps have no bactericidal power, even when combined with antiseptics. The combination of sulphur and ichthyol with soap is more to the point because of the action of these substances upon the glands and vessels of the skin, but the addition of extra fat is without scientific basis. The irritating effect of soap is increased if it contains paraffin or benzine derivatives. The best results are obtained by using as little soap as possible and well washing it off.—*American Journal of Dermatology.*

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Original Communications

A CASE OF THROMBOSIS OF THE LATERAL SINUS, RESECTION OF THE INTERNAL JUGULAR VEIN, SPONTANEOUS EVACUATION OF AN ABSCESS OF THE POSTERIOR FOSSA THROUGH THE FORAMEN JUGULARE; RECOVERY*

By Perry G. Goldsmith, M.D.

Senior Assistant Surgeon, Department of Laryngology and Otology, Toronto General Hospital, Toronto, Can.

These are the notes of a case showing some of the graver complications of chronic suppuration of the middle ear, one occurrence alone, *viz.*, the evacuation of an abscess of the posterior fossa of the skull through the foramen jugulare, being in itself sufficiently rare to justify the report.

A. G—, aged forty-nine. Family and personal history good and in no way bearing on his present complaint. Since 1903 he suffered from a periodical discharge of the right ear. Until his present illness that discharge was looked upon as an inconvenience sufficiently important to require attention only when the odor was noticeably foul. Instillation of drops and syringing usually controlled the discharge, sometimes stopping it for weeks. In 1904 there was some blood seen in the aural discharge. From 1905 until 1907 there was no discharge—at any rate none appeared externally. After the later date the discharge was practically constant until the present illness, but it was never at any time profuse. Last September there was an increase, associated with decided deafness and a dull pain

*Read at the Canadian Medical Association meeting, Montreal, 1911.

in the same side of the head. During this time and during the autumn he had frequent attacks of nausea and vomiting. He became very indifferent to his work and interests and at times was decidedly dull and stupid. There were no chills or any external evidence of mastoid involvement. He was seen by his physician in the second week of January, 1911, who found the condition as follows: Temperature 99°F., pulse 100. No mastoid tenderness or œdema. Through the remains of the drum-head the mucous membrane was noticed to be thickened and moist. There was no quantity of pus in the ear nor was there any encroachment of the canal wall into the external auditory meatus. The patient complained of pain in the side and top of the head, and occasional attacks of nausea but no sudden vomiting. Examination of the eye-ground normal. Labyrinth tests not taken. Within one hour after the examination the patient had a very decided chill followed by sweating. Though he was in a part of the city he knew well, he could not make out where he was. I was asked to see the case and found the patient quite flushed; temperature 106°F., pulse 110, respirations 28. The aural condition was about the same as noted above except that there was marked pain on pressing the jugular directly behind the angle of the jaw. White blood-count 17,000. Careful physical examination by a physician failed to detect anything to account for this condition. Another chill followed in two hours and it was decided to operate that night.

I will not go into the operation step by step but will give the after-features of interest.

(1) *The Density of the Bone.*—I have never seen anything approaching the hardness of the mastoid; there was not a cell found until the antrum was reached. I am sure this bone had all the features of what has been termed the billiard-ball mastoid. The radical operation was performed, and in lowering the facial ridge the bone was so dense here that the cutting edge of a first-class chisel was broken and remained embedded in the bone until cut out.

(2) *The Condition of the Mastoid Antrum.*—As soon as the antrum was reached pus welled up at once. There was only a small quantity, however. The upper and posterior walls of the antrum as well as of the aditus and tympanum were gone, and in their place was dura covered with granulating tissue. The posterior wall of the antrum was gone, and the lateral sinus covered with pus and granulating tissue took its place. The cavity was cleared of necrotic tissue, and care-

fully examined. No opening was seen in the external semicircular canal nor was any carious area found communicating with the labyrinth. The dura was not unduly bulging, but on separating it from the bone above and in front where granulating tissue was excessive, a gush of about two drachms of pus took place. A small gauze drain was inserted here and the dura left alone, as one might easily break down any adhesions which were localising the pus. The sinus was discolored and soft and occlusion was self-evident. On being opened a soft yellow clot was removed. No bleeding took place either above or below, and only above after exposing the sinus nearly to the torcular, and plugging easily controlled it. It was then decided to remove the jugular in the neck. This was done, the vein being removed above the facial. There was no clotting in the jugular. The operation being very long and fatiguing, I asked the assistant to sew up the neck and put in a cigarette drain. The lower end of the vein was not brought into the neck as I usually prefer to do.

The subsequent course of the case presents some interesting features, namely:—

(1) The occurrence of a severe septic pharyngitis and laryngitis.

(2) The escape of a large collection of pus through the neck wound, the abscess in the posterior fossa.

(3) The occurrence of acute labyrinthitis and facial paralysis—weeks after the operation.

While during the four days following the operation (January 21) the patient was free from pain he continued to have an evening rise of temperature, 100° to 101:2° F., with pulse nearly always below 70. Fundi oculi normal. Restlessness marked, requiring sedatives. Quinine and urotropine were administered every four hours. At this time the white blood-count was 20,900. He now complained of pain in the neck and side of his head. The gauze in the neck wound, which was daily removed, was very lightly packed so as to encourage drainage. On January 25 hot bichloride fomentations were now applied to the neck. On January 27, following the removal of the gauze from the neck, there gushed out about three ounces of very foul greenish pus. During the next few days, where we anticipated a decided improvement in the patient's condition, it was disappointing to find the patient much worse. Temperature continued to remain about 104° F., and with

pulse about 100. There was considerable cough, rusty sputum and sore throat. The faucial arches and tonsils were greatly swollen, and on the tonsils there was a greyish exudate which later on extended down the side of the larynx and pharynx and was associated with œdema reaching as far as the ventricular band on the left side. Physical examination revealed roughened breathing over the base of both lungs but no pneumonia. The exudation of the throat and sputum showed streptococci and staphylococci. General supporting treatment with plenty of fresh air was continued for three or four days and the temperature returned to 99° F., but on February 1 there was another rise during the day from 101° to 102°. On this date the patient complained of severe headache and was noticeably drowsy. He also complained of tenderness and throbbing in the back of the neck. This was greatly relieved by another, though smaller, discharge of pus from the neck. The mastoid dressing had been carried out daily during this time, but from the lower end of the lateral sinus groove pus was constantly oozing, pulsating and under pressure. It was very difficult to keep it draining properly. A curved glass tube was used to aspirate the pus. By the softening of the clot in the jugular bulb, moreover, it came from downwards and backwards, apparently from the cavity of the posterior fossa. With a large discharge of pus in the neck the pus from the lower end of the lateral sinus was noticeably less and not pulsating.

The patient's condition then continued quite satisfactory until February 20, when he again had some sore throat and cough, temperature around 103° and 104° F. for several days, and pulse varying from 100 to 130. The condition of affairs in the chest was very similar to what had been observed a few weeks before, but the throat infection was very much milder. Prostration, however, was very great. For the next two weeks the patient gained in strength, the mastoid wound was practically closed, while a small sinus which persisted in the neck soon closed over when a silk ligature came away. At this time the patient complained of a little aching in the side of the face, which was rapidly followed by facial paralysis and very marked vertigo and nystagmus. Owing to an hour-glass contraction of the canal, which somehow was allowed to occur, the caloric tests were not satisfactory. There was a good deal of pain in the head and some nausea, and the patient was unable to walk straight ahead, but would incline to fall to one side. The facial paralysis rapidly became complete. The question of abscess of

the cerebellum or acute suppuration of the labyrinth arose. The vertigo, however, and the facial paralysis gradually became less, the former disappearing after having been present for a week, while the latter still showed signs until about three weeks. The present condition of the patient is entirely satisfactory, though a small contraction of the canal makes inspection of the tympanum difficult. There is no aural discharge, and a cotton-tipped probe is removed dry from the tympanum cavity.

84 Carlton Street.

OPENING ADDRESS AT THE FACULTY OF MEDICINE, UNIVERSITY OF TORONTO

By Sir Hector C. Cameron,
Emeritus Professor of Surgery, University of Glasgow, Scotland.

I esteem it a very high honor to have been invited to address you to-day at this opening of the session of your Medical School, but although my acceptance of that invitation was immediate and without hesitation, I confess that I felt and still feel some misgiving as to my ability to select and adequately to deal with any topics which may possess the interest of being more or less cognate to the educational pursuits in which you are engaged, or related to the profession which it is your ambition in future to serve.

Moreover, this duty of delivering an introductory address is one the discharge of which is apt to be regarded by those of us who have grown old in academic life, and have frequently been officially present on similar occasions, as very trite and even tiresome in its repetition. But I desire to remember that it is to the students and not to the older members of the audience which honors us with its presence that my remarks are to be specially addressed. To some at least of the students such an occasion must necessarily be novel; while all of you, I trust, are sufficiently ingenuous to be able to suffer, for a little, words of exhortation from one who has travelled to the very end of the road upon which you are now only setting out.

And you are setting out, gentlemen, at a point of time in the history of the healing art of good auspices and big with the promise of progress, because its work is now more and more becoming based upon sure and stable foundations. If I contrast its present position and prospects with those it possessed when I became a student of medicine in the early sixties, language can hardly exaggerate the difference. At that time such boast of comparatively recent progress as existed centred around the use of the stethoscope and anæsthetics, but general blood-letting was not yet wholly abandoned, while the use of leeches and other means of abstracting blood locally was a daily routine. Pathology, as a science, was only beginning to be cultivated, and, except in the University of Edinburgh, I question whether in Great Britain there was any professorship or lectureship, and certainly there was no equipped labor-

atory, established for its teaching. No separate instruction on the subject was given at all in my own university—that of Glasgow—except such teaching as was connected with the making of post-mortem examinations and with the demonstration of the gross evidences of disease to be found in different parts of the dead body. The microscope was in the hands of experts, but few students were trained in its use. Then, and for many years to come, the methods of diagnosis, of differentiation between the hitherto apparently similar states of ill-health, as well as the means of successfully treating and preventing many formidable and most fatal diseases, which have of late years flowed in so full a flood of the still very young bacteriology were, as a matter of course, unknown and undreamt of. The only guides for the physician and surgeon in charge of acute and dangerous illness were the pulse rate, the state of the tongue and the general aspect and behavior of the patient, for even the clinical thermometer and the temperature chart were not yet devised. That pedantic word *gynæcology* was still uninvented, and the diseases of women were dealt with almost entirely by the physician with the aid of the drugs of the pharmacopœia. Typhoid was only beginning to be generally differentiated from typhus fever; both were abundant in all large centres of population, and the latter claimed among its victims large numbers of medical practitioners and students, for the subject of public health was in its infancy, and was neither known, practised nor taught, as we now understand it. Every wound, whether accidental or made by the surgeon, with extremely few exceptions, discharged pus freely; and putrefactive changes occurring in all of them, produced in the atmosphere of every surgical ward, no matter how spacious and well-ventilated, a fetid sickening odor which tried the student on his first introduction to surgical work more even than the unaccustomed sights of the operating theatre. In every surgical clinique Death held perpetual court, for wound-begotten diseases—hospital gangrene, pyæmia, tetanus and the rest of that fatal brood, which, thank God, are now to all intents and purposes banished from surgical practice—were never entirely absent, at any time, from the hospitals of that day. No matter how carefully and skilfully an operation was performed, the issue was looked forward to with anxiety and dread. Few of those who did recover did so without serious episodes in their illnesses and disquieting complications of some sort. All suffered from pain and fever, more or less severe, and convalescence was only reached after weeks or months of distress-

ing experiences of many kinds. I have myself, when a student, seen no fewer than five patients suffering from pyæmia which followed amputation for injury, die in the course of one week in a single ward of twenty beds, while other instances of the same disease and of hospital gangrene lay around them. Probably few of you may see more than five amputations of injured limbs during all your studentship—so great has been the progress of conservative surgery—and those which you do see, if only the patients survive the shock of their original injuries, will probably all recover.

For our complete emancipation from the dreadful evils of those dark days of surgery and for no small part of the remarkable advance made also in the domain of the physician, we are indebted to the life and work of that great man, Lord Lister, who died only last February, and whose career has since been commemorated as the boast and the blessing of our profession in every civilized land, and nowhere more heartily and warmly than in this city of Toronto. Great in character, as well as in achievement, he will ever remain an examplar for all of us; and I feel inclined to suggest to you one or two lessons—we have no time for more—to be derived from facts, lessons which may have special interest for you now and may be of value hereafter. And first, I should like to recall and to relate to you a little chapter of medical history, which concerns him and must always be of interest to every teacher and student of clinical medicine, surgery and midwifery.

I have indicated to you the awful mortality which occurred in surgical hospitals at the time of which I have been speaking. Equally appalling was that to be met with in all maternity charities. At least one other than Lister was working actively and earnestly, although in a very different direction, with a view, if possible, of furnishing a remedy. I refer to the late Sir James Simpson, the celebrated professor of obstetrics in the University of Edinburgh.

He had been long struck by the great maternal mortality then prevalent among the patients of the lying-in hospitals, as compared with that which obtained in the case of women delivered in their own homes, and knowing how analogous were the circumstances of the newly-emptied uterus with that of the newly-inflicted wound, and how similar were the dangerous and often fatal sequelæ of each, he was prepared to find a little disproportion between the number of deaths of those operated on in private practice and those treated in what he spoke of as "palatial hospitals." It was the unfavorable environ-

ment, therefore, of the patient which he regarded as the real cause of disaster, and it was the practice of collecting together many wounded persons under one roof of which he set himself, with all his accustomed energy, to denounce, and, if possible, to alter and supersede. He wrote and spoke on the subject with the frequency and force of an earnest agitator, so that much attention was aroused by his views, and not a few influential converts adopted his creed. In a pamphlet entitled, "On Our Existing System of Hospitalism and its Effects," he wrote as follows:—

"Above twenty years ago, in speaking of the effects and evils of our large hospitals—as these hospitals are at present constructed—I took occasion to remark: 'There are few or no circumstances which would contribute more to save surgical and obstetric patients from phlebitic and other analogous disorders than a total change in the present system of hospital practice. I have often stated and taught that if our present medical, surgical, and obstetric hospitals were changed from being crowded palaces—with a layer of sick in each flat—into villages of cottages, with one or, at most, two patients in each room, a great saving of human life would be effected; and if the village were constructed of iron, as is sometimes done for other purposes, instead of brick or stone, it could be taken down and rebuilt every few years, a matter, apparently, of much moment in hospital hygiene.' 'Since the date mentioned,' he continued, 'I have conversed on many occasions with many medical men on this subject. I have found, however, that to most professional men it seemed to be altogether a kind of medical heresy to doubt that our numerous and splendid hospitals for the sick poor could by any possibility be aught than institutions as beneficial in the practical results as they were benevolent in their practical objects. When acting in 1867, at Belfast, as President of the Public Health Section of the National Association for the Promotion of Social Science, I spoke on the subject of hospitalism at some length in my inaugural address and propounded the questions, to what extent are hospitals, as at present constructed, banes or blessings? and how can they be changed so as to convert them from the former to the latter? I concluded my remarks on this point by again suggesting publicly that to render our hospitals as healthy and useful as possible, and in order to acquire sufficient space and air and isolation for their sick inmates, they should be changed from wards into rooms, from stately mansions into simple cottages, from stone and marble palaces into

wooden, or brick, or iron cottages. On the same occasion, after speaking of the relative treatment of some diseases, such as fevers, etc., in and out of hospitals, and after showing—chiefly from the large statistics of Mons. Lefort—that as a general rule, parturient women recovered in a much larger proportion when delivered in their own homes than when delivered in lying-in hospitals, I proceeded to ask: 'In regard to surgical patients in hospitals, does the same law hold good as in respect to obstetric patients? At the present time medical science is, I believe, in want of any sufficient data to determine the question. The general mortality in hospitals after operations is confessedly very great, far greater than was believed a quarter or half a century ago, when no sufficient statistics had been collected on the matter. The man laid on an operating table in one of our surgical hospitals is exposed to more chances of death than the English soldier on the field of Waterloo. Some authors have collected on a large scale the statistical results of some operations, and particularly of amputations of the limbs. Out of 1,656 cases of amputation performed in the hospitals of Paris and collected by Messieurs Malgaigne and Tielat, 803 died, or nearly one in every two. Dr. Fenwick has collected together from various sources 4,937 cases of amputations of the limbs. Of these 1,562 died, or nearly one in every three or four. 'The assertion,' observes Dr. Fenwick, 'that one person out of every three who suffers an amputation perishes would have been repudiated a few years ago as a libel upon the profession, and yet such is the rate of mortality observed in nearly 5,000 cases.' 'Are the results of amputation,' in conclusion asked Sir James Simpson, 'in dispensary, private or country practice as deplorable?' Adequate data have not been collected. Certainly the general belief of the profession is that in country practice amputations are not so frightfully fatal."

In order to settle this point, if possible he collected extensive statistics of the results of amputation in rural practice. These he obtained by addressing a circular letter, with an accompanying schedule to a great number of medical men practising in the provincial and rural parts of England and Scotland, requesting them to furnish him with the results of the limb amputations which had been performed by them in their private practice. The returns obtained from these applications numbered altogether 2,098 cases of amputation. The total number of deaths was 226, *i.e.*, one in every 9.2 died or 10.8 in every 100. He compared with this mortality that of a sim-

ilar number of limb amputations performed in the Royal Infirmaries of Edinburgh and Glasgow, and in nine of the leading London Hospitals. In these 2,089 limb amputations performed in eleven great hospitals by surgeons of skill and experience he found that no fewer than 855 had died, *i.e.*, 1 in 2.4. In other words, almost one half of the patients operated on died. Simpson concluded his pamphlet thus:

"This excess in about 2,100 limb amputations, of 629 deaths in hospital practice as compared with rural practice; in our palatial hospitals as compared with our rural villages and cottages; in large wards as compared with isolated rooms, is certainly much greater and more pronounced than I myself expected when I began the present enquiry. But must the calling of this dismal death-roll go on unchallenged and unchecked? Shall this pitiless and deliberate sacrifice of human life to conditions which are more or less preventable be continued or arrested? Do not these terrible figures plead eloquently and clamantly for a revision and reform of our existing hospital system?"

The pamphlet from which I have thus freely quoted was published and scattered in great profusion and in all directions in the spring of 1869, and if it did not succeed in bringing about the reform of hospitals which its author desired, it was not because he died only a year after its publication. There were many ardent disciples who would gladly have carried on the propagandism. But happily, the difficulty was to be solved in a very different way. Just after leaving Glasgow in 1869, and only a few months before Simpson died, Lister published a paper entitled "On the Effects of the Antiseptic System of Treatment upon the Salubrity of a Surgical Hospital." His first experience as a hospital surgeon began in the Royal Infirmary of Glasgow, at that time one of the most unhealthy of hospitals; but, ere he left it, the effects of his new treatment on the health of the wards was manifest to all who witnessed them. As he himself declared, that treatment was in the highest degree beneficial, converting the wards from some of the most unhealthy in the kingdom into models of healthiness. I shall read to you the concluding sentence of his paper:

"The result of this great change has been to demonstrate conclusively that the exhalations from foul discharges are the essential source of the insalubrity of surgical wards and, when this is effectually suppressed, other conditions, which we are accustomed to regard as most pernicious, become powerless to produce serious evil. It is obvious that the facts recorded in

this paper are of extreme importance with reference to the vexed question of hospital construction. With a view of assimilating the atmospheric conditions of our large hospitals to that of a private dwelling, it has been lately proposed to do away with them altogether in their present form, and to substitute for them congeries of cast-iron cottages, capable of being occasionally taken down, cleansed and reconstructed—a plan which, besides involving enormous expense, would interfere most seriously with the proper supervision of the patients and with the teaching of students at the bedside. From what has been related above it is plain that no material alteration will be required. We have seen that a degree of salubrity equal to that of the best private houses has been attained in peculiarly unhealthy wards of a very large hospital by simply enforcing strict attention to the antiseptic principle. And, considering the circumstances of these wards, it seems hardly too much to expect that the same beneficent change which has passed over them will take place in all surgical hospitals, when the principle shall be similarly recognized and acted on by the profession generally. The antiseptic system is continually attracting more and more attention in different parts of the world; and whether in the form it has now reached or in some other and more perfect shape, its universal adoption can only be a question of time. The noble Institutions of which our country is justly proud, admirably adapted alike for the treatment of the sick and the instruction of the student, will then be cleared of the only blot that now attaches to them—the malignant influence of impure atmosphere."

How amply these anticipations have been fulfilled is probably known to all of you. The very word "hospitalism" died an early death and has entirely dropped out of medical literature. Our splendid opportunities of successfully prosecuting clinical practice, research and instruction have by Lister's instructions been more fully preserved to us. It requires no great power of imagination to realize how entirely they would have been destroyed and lost by any scheme which scattered our patients over many roods of ground and housed them in camps or villages of two-roomed cottages. Instead, fortunately, they are still accommodated and compactly housed in flats even more numerous than Sir James Simpson ever saw, and with even larger "layers of sick" on every floor. No outcome of the antiseptic system of treating wounds occasioned Lister more pleasure and pride than this one. The Royal Infirmary of Glasgow, in which he had such unhappy surgical experiences

when he joined its staff in 1861, has yielded almost from the time he left it until its recent reconstruction, although composed of the same walls and floors as in his day, as good results as any other hospital in existence. He himself had always practised in very old hospitals and operated in theatres of old-fashioned construction, but he knew that he could depend on securing the best results in his wounds; and so he proved the fact that it was not necessarily change in the environment of the patients, but the avoidance of sepsis in their wounds, which was required to ensure salubrity and a low death-rate in surgical hospitals. To that discovery you owe the continuance of your splended and convenient opportunity of clinical study. You owe also a corresponding sense of gratitude to the memory of the man who made the discovery in the face of much hostile and often bitter criticism and at a most serious crisis in the history of hospital administration and construction.

One fact in his own education, which Lister often referred to in conversation, with much satisfaction, was the excellent knowledge which he acquired from his teachers of the preliminary scientific subjects of biology, chemistry and physics. The former he regarded as the best and, indeed, the proper introduction to the scientific study of human anatomy and physiology, while he recognized that the knowledge which he had gained early in life of the two latter proved his best equipment for the work which he afterwards undertook. To the great importance of these early studies, therefore, I venture to direct your attention, and I do so the more readily because there is not wanting at the present day, a certain tendency towards minimizing their value to the medical student. I thoroughly realize how crowded is your curriculum even although five years are allotted to its completion, and how constantly your attention is enchained and your energies dissipated by preparation for frequently recurring examinations. Many persons who guide opinion in matters relating to medical education, at all events in Great Britain, have been led to advocate that the congestion in the medical curriculum should be relieved by relegating these subjects entirely to the period of school life. Already the Conjoint Board of England accepts from candidates for their licenses certificates of study in these subjects from various public schools, whose laboratories and means of teaching have been inspected by visitors from that Board, and whose instruction they recognize for that purpose. For a time a majority of The General Medical Council of Great Britain and Ireland resisted this innovation, but have now apparently accepted it. Of this

change Lister strongly disapproved and often expressed the hope that, at all events, the Universities would never give their countenance to it. If the student must be relieved of some of the burdens which weigh so heavily upon him, I believe it will be wiser to seek for that relief in the lessening of the number of his examinations rather than that of the subjects of study which now find a place in his curriculum. When I was a student, Lister was Professor of Systematic Surgery in the University of Glasgow, and he always exempted those who had conducted themselves creditably in the surgery class-examinations from further examination in that subject in the final trial for their degree. In some such direction I think that relief for the overburdened student is to be sought in our Universities rather than in adopting any course which might appear to minimize the importance of the preliminary scientific subjects. Their value to the medical profession may, in some degree, be gauged by the enormous increase of power which has accrued to its practitioners from the labors of special cultivators of those fields of science. It was upon the discoveries of Pasteur, a chemist and not a medical man, that Lister based the researches and work which have renovated the whole practice of surgery, and converted it from an empirical and disappointing into a scientific and reliable art. A great, useful, and permanent addition to our resources has lately been given to us by a physicist, Professor Röntgen, in X-ray photography; while the real cause of syphilis, for the discovery of which medical investigators have been straining their eyes for generations, has recently been identified in the form of a protozoal organism, and by one who was not of their number—Schaudinn, a biologist. Surely no facts could better indicate the part these sciences may play in the advancement of Medicine and Surgery, and nothing could more clearly point out to the medical student the wisdom of acquiring a thorough acquaintance with such parts of them, at least, as bear, or may even give the promise of possibly bearing, upon the future work of his life.

I have referred to the hostile and at times rather bitter criticism which assailed Lister in the earlier days of his life-work from many influential quarters. This opposition was due probably not to any disregard for progress and development in the surgical art, but rather because someone felt that they were suddenly asked, by a young and comparatively unknown teacher, to give up cherished beliefs and modes of practice to which they had been long accustomed. They had been used, from time to time, to welcome and adopt newly devised operations, improved

methods of treating individual diseases, or classes of diseases, recently invented instruments and apparatus of all sorts, as well as novel additions to their resources of even such wide-reaching consequences as in the case of anæsthetics. But here was a change, a complete revolution in the whole practice of the art, and their conservative instincts forbade them, at first, to follow a lead so unexpected and so much at variance with all former experience and usage. "One man knew a secret way into the city," says a Spanish proverb, "but the besiegers said, why should we who are so many, follow one man?" This was the spirit of large numbers of those who resisted any acknowledgement of the value and of the originality of the new treatment, for those who offer opposition to any new advance always first dispute its value and when proof of its value begins to accumulate, try to cover their retreat by questioning its originality. This attitude of many of the leading practitioners and teachers of surgery was often most discouraging and depressing to Lister, although it never made him relax his enthusiasm and industry. One sustaining consolation which he constantly spoke of at that time, was the support which he received from his own students and from the young practitioners who frequented his wards. "I have always had youth on my side," he used to say with great and joyful satisfaction, when he felt discouraged by the coldness of colleagues and contemporary practitioners. In this connection it may not be uninteresting if I read to you a sentence or two from a letter which I received from a distinguished surgeon of America acknowledging a copy which I had sent to him of an account I published a few years ago of the history of the evolution of antiseptic surgery.

"Your book carries me back," he wrote, "to the spring of 1869, when as a student I had spent three years in Europe, after taking my medical degree at Harvard. I was then on my way home, thinking I had acquired all there was to know of up-to-date surgery. I had heard for the first time of a man in Glasgow who healed wounds without suppuration. I remember attending a meeting of the Pathological Society in London and hearing some surgeons laughing about this report. I cut away from a delightful four-in-hand trip through the south of England to put in a last week of my three years with Lister.

"I was most cordially received and remember well his saying after a discussion: 'I do not expect my contemporaries to accept this doctrine; I look to you, the coming generation to adopt it.' It did, indeed, take a generation to establish it in all its present perfection, as you have so interestingly shown."

In the introductory address which Lister delivered to the students of Edinburgh on "The Causation of Putrefaction and Fermentation," when he entered there upon his duties as Professor of Clinical Surgery, in the winter of 1869, he concluded in the same strain of confidence to their ability to draw just conclusions in matters of fact. "I commend these facts," he said, "to your candid and impartial judgment, beseeching you to form your own opinion regarding them. The minds which you bring to bear on this subject to-day are very much the same as they will be throughout your lives. An observation which any one of you may make now will serve, in after life, to illustrate a course of lectures, should he occupy a position corresponding to that which I have now the honor to hold. And you are as competent as you ever will be to draw logical conclusions from established data. Do not let any authority shake your confidence in knowledge so obtained."

From these various references to the history of the time, you will see that Lister always entertained a high opinion of and reposed much trust in the ingenuousness of the youthful mind. Well-educated and thoughtful youth possesses always a strong, I am almost tempted to say, an unerring instinct to detect the spirit of the age in which its lot is cast. "With every generation," it has been well said, "there springs up a new order of ideas. The earlier the age at which a man seizes the ideas that will influence his own generation, the more he has a start in the race with his contemporaries. Now, the ideas that influence the mass of the rising generation never have their wellhead in that generation itself. They have their source in the generation before them, generally in a small minority, neglected or contemned by the majority which adopts them later." It was the consciousness of such a truth as this which made Lister confident and satisfied when he realized that youth was on his side. It is well, therefore, for you to remember that you are as well qualified now as you ever will be to observe facts and to treasure them up in your memory; nay more, even to draw such deductions from them as logic and common sense will enable you to draw. But here I desire to offer you a warning. You will be wise if you refrain from attempting to go further than this in the meantime. You are not qualified and must not deem yourself yet qualified to generalize and to form and express final opinions on matters relating to medical and surgical practice. Your duty is now to gain and gather knowledge; but you must realize that it is a knowledge which is not at once power, because you have not yet learned the mode of applying

it; have not yet progressed towards converting your knowledge into wisdom by adding to it, experience. You are necessarily still in the stage when "Knowledge comes but wisdom lingers"; a stage will come later when you will realize that "learning may wiser grow without its books."

> "Knowledge and Wisdom, far from being one
> Have oft-time no connection. Knowledge dwells
> In heads replete with thoughts of other men;
> Wisdom in minds attentive to their own:
> Knowledge, a rude unprofitable mass,
> The mere materials with which wisdom builds,
> Till squared and smoothed and fitted to its place,
> Does but encumber when it seems t' enrich—
> Knowledge is proud that he has learned so much,
> Wisdom is humble that he knows no more."

While, therefore, you will do well to remember that in the pursuit of knowledge you are as free as you ever will be to make observations, whether in the science laboratory or in the hospital ward, and even to draw such conclusions as any well-educated mind may suggest to itself, you are not safe to form and adopt final opinions. I offer you this warning because I know that many persons are ready to say to the student: "Maintain at all hazards your independence of judgment. Accept little or nothing as fixed and settled, and pay the slightest possible deference to authority and tradition. Call no man your master. *Nullius addictus jurare in verba magistri.* Prove all things, but hold fast only to those which appear to you to be good." Such persons, on the other hand, tell the teacher that his only legitimate function is to give a full and faithful account of his subject; to bring before the minds of his students with what vividness he may, its principles and details, sinking all pet opinions, all personal bias, all dogmatic doctrine; to describe, without feud or favor, the conflicting views of its cultivators, remembering that when he reaches matter which has been or still is the battle-ground of contending parties, his office is not one of advocacy, but one rather of judicial summing up, leaving each of his hearers to arrive at a verdict for himself. But persons who tender such advice as is here indicated appear to forget a very important factor, *viz.,* that, while a tyro in the subject is quite able to observe for himself, he is not in a position to generalize. In matters of opinion it is necessary for him to take much upon trust. It, therefore becomes the

duty of a teacher, in my humble opinion, where he holds convictions, to let them be heard with no uncertain sound. Implicit belief in them is not required and cannot always be expected but they serve to fill up gaps, so to speak, in the view which the individual is expecting to get of the subject, and they at all events do service until confirmed, modified or displaced by his own experience. There is nothing so hopelessly bewildering, so completely unsatisfying to any one learning the details of a subject, either from a book or a teacher, as the enumeration of a great variety of opinions, without the slightest hint with which, if any, lies the sympathy of the writer or lecturer. I have never heard a complaint from a student that he found a book or a teacher too opinionative; but I have heard this other complaint that the one contained or the other taught the opinions of too many people.

From all of these considerations it will be obvious that each stage of life has its own duties and its own limitations, and that he will probably best guide and realize his destiny who most truly and fully appreciates these as they successively arrive. Robert Louis Stevenson writes in one of his short essays, "To love playthings well as a child, to lead an adventurous youth, and to settle, when the time arrives, into a green and smiling age is to be a good artist in life and to deserve well of yourself and your neighbors." To recognize the limitations which surround your present stage of life, to apprehend fully that its chief end is the acquisition of knowledge, and that your present training has or ought to have for its object, to teach you how to learn from your future experience; to submit gradually your knowledge to the test of that experience, until it has grown into wisdom by being "squared and smoothed and fitted to its place"; to use the wise skill thus obtained, conscientiously and industriously during your active life for the good of your fellow men, and—hardest of all, perhaps—once more to recognize the limits of your powers when age approaches and natural force abates, is to be a good artist in a medical career, and to deserve well of yourselves, of your brethren and of the public. There is a French saying "Si jeunesse savait, si vieillesse pouvait." Would that youth were endowed with experience and old age with vigor! But the aspiration is a foolish one except in so far as it emphasizes the fact that the contrary is the truth. We shall make the best of our lives if we plan them so that we learn well while young, work hard and strenuously during our manhood and are content cheerfully to withdraw from the struggle as old age approaches.

But it is a struggle in which something more is needed for success than accurate knowledge and wise skill. The practitioner must recognize that a high moral standard of conduct is required of him. It is difficult to convey in a few sentences, what such a standard should be. I once made the attempt to indicate this to an audience much the same as that which I have now the honor to address and, perhaps, I cannot do better than repeat to you the words I then used. "The practitioner of medicine," I said on that occasion, "however ably he cultivates both its science and art, will fall far short of his highest ideal, unless he also tries to illustrate in his daily round, what one may call, for want of a better term, the moral side of his profession. To devote himself to a daily and often self-denying personal service of the sick; to render that service truthfully, soberly and chastely; to resist all temptations to self-advertisement, and the depreciation of rivals—for the depreciation of others is only another form of self-appreciation; to be silent in regard to much of what he sees and is told in the houses into which he enters; to be chivalrously regardful of the modesty of women, sympathetic with the easily aroused fears of little children and patient with all manner of men; to feel on many an occasion much more anxiety than he shows; not to be untruthful to the sufferer from hopeless disease, and yet to remember, as Sir Thomas Browne, himself a physician, has said, that "it is the heaviest stone that melancholy can throw at a man to tell him that he is at the end of his being"—these, and many other difficult duties and acts of self-discipline like these, are incumbent upon every medical practitioner."

Gentlemen, the ideal of conduct such as I here endeavor to indicate is far from being easy of attainment and there are few of us, perhaps, who completely and adequately fulfil its requirements. But all its essentials may be learned and practised even during your student life. The formation of your character is in process as surely as is your acquisition of knowledge, and in wishing you all success in your work here and hereafter, I conclude by impressing upon you that he who faithfully pursues his studies now, who gradually acquires skill by the fusion of his knowledge with his growing experience and who guides all by a high ethical standard in respect both of his patients and of his professional brethren is the man who, in the struggle of the coming years, will be found amid the sunshine and the hope of the van and not amidst the dust and fatigue of the rear.

Editorials.

THE AMERICAN HOSPITAL ASSOCIATION

The annual meeting of this Association, held in Detroit, September 27 and 28, was in all respects successful. There were thirty-five delegates from Canada. So far as we can learn the prevailing opinion of those present was that much of the success of the largest meeting in the history of the organization was due to the Secretary, Dr. J. N. E. Brown, formerly Superintendent of the Toronto General Hospital, and now in charge of the new General Hospital at Detroit.

All questions relating to the promotion of economy and efficiency in hospital management were discussed during the four days' meeting, and a large exhibit of appliances invented, improved, or arranged by hospital workers was displayed for the benefit of the delegates. A feature of the meeting was the evidence of the growth in the social service work of hospitals, and in the importance in the services of the visiting nurses sent out to ascertain, and, if necessary, to correct the sanitary conditions in the homes from which patients came. The organization of hospitals for medical and surgical teaching was also discussed, and the importance of a regular system of promotion in hospitals was urged. During the consideration of a report on hospital efficiency, finance and economics, stress was laid upon the value of a cost accounting system, similar to that introduced into the Ontario hospitals for the insane by Hon. W. J. Hanna, the Provincial Secretary.

Mr. John Ross Robertson addressed the Association on methods of keeping the public informed re-

garding work being done in hospitals, and Mr. Richard P. Borden, of Fall River, Mass., discussed the obligations of hospital trustees. During the debate on this paper a number of speakers expressed themselves as opposed to municipal hospitals, except for the treatment of communicable diseases. Others who took part in the debate took the ground that patients not paying a rate equal to their cost of maintenance in the hospital, should not be permitted to have their own physicians in attendance upon them.

ACCIDENTAL DEATH AT GRACE HOSPITAL

A patient in Grace Hospital, Toronto, got out of his bed, went out of his ward onto the balcony, jumped or fell to the ground, and died shortly after, October 4th. The verdict of the Coroner's jury was so unique in many respects, but especially in its stupidity, that we think it worth while to publish it in its entirety:

"That Robert Scott came to his death on October 4 while a patient at Grace Hospital, Toronto. That his death was accidental, and that the medical superintendent and staff of the institution named took all precaution possible, considering the condition of the building, which the evidence goes to prove beyond question is structurally defective, and that until such time as the recommendations of Dr. Bruce Smith be adopted, would urge that all grants to the hospital be suspended forthwith. The jury think that the Board of Trustees are deserving of severe censure for the careless manner in which they attend to their duties, and we urge that steps be taken at once to urge upon

the city authorities the necessity of the erection of a psychiatric clinic for the treatment of such incipient cases of insanity as that of deceased."

It will be noticed that the jury considered that "the superintendent and staff of the institution took all precaution possible," but that the "Board of Trustees are deserving of severe censure for the careless manner in which they attend to their duties." Surely the members of the jury do not expect the Trustees to stand on guard in the corridors to prevent patients from leaving their wards, and jumping off balconies. Perhaps these enthusiastic philanthropists intended to censure the Trustees because the building was not in perfect condition. The Trustees know that as well, and really a great deal better, than the jurymen. They have been spending their own money in improving matters in many respects during the last two or three years. If they could get more outside help they would gladly erect a new building. The Board of Trustees of Grace Hospital happens to contain a number of generous public-spirited men, who are willing to give a good deal of time and money with a view of helping the sick poor. Would this intelligent jury wish the Board to resign, and would its members desire to spend considerable time and money, and undertake the management of the hospital? Of course not, we may say, fortunately. We rejoice that we are able to say that the Boards of the various charitable institutions in Toronto, whether composed of men or women, or both, are doing magnificent work in the interests of suffering humanity, and it is to be hoped that carping criticisms of such men as were on this jury will not prevent them from going on with their good work in the future.

THE VISIT OF THE GERMAN DELEGATES

A distinguished and charming party visited Toronto, October 3. There were about two hundred and fifty, including a fair number of ladies. They arrived at the Union Station at 4 o'clock in the afternoon and were soon after driven to the Convocation Hall of the University of Toronto where a reception was tendered them by President Falconer on behalf of the University, and Dr. Reeve, on behalf of the Academy of Medicine. President Falconer first addressed the party in their own language and then in English. He told them a few facts concerning the university. He concluded by saying that the relationship of the University of Toronto to the universities of Germany was close, and "the inspiration we draw from your universities is strong and continuous."

Dr. Reeve, on behalf of the Academy of Medicine, said he welcomed them not only as citizens of the German Empire, but also as distinguished members of the medical profession.

Dr. Rudolf Lennhoff of the University of Berlin responded, on behalf of the visitors, in German.

A short programme of music on the new pipe organ in Convocation Hall was given by Mr. F. M. Moure, Bursar of the University, after which light refreshments were served in the foyer of the hall.

THE CIVIC BANQUET

Our good friend, Controller Maguire, the Chairman of the Reception Committee, in accordance with the wishes of the Council, organized an admirable entertainment and reception for the visitors. It was

technically known as a luncheon, and was prepared for 1 o'clock. Word came, however, that on account of some dislocation of train connections, the party would not reach Toronto until four or five in the afternoon. The function was postponed until half past six. The majority of the delegates got an idea that half past seven was the hour for assembling.

Notwithstanding these unpleasant drawbacks the banquet was a decided success. Thanks to the excellent arrangements made by Controller Maguire, the affair passed off without a hitch of any sort. The party was composed of leading German professors of various departments of medicine, including hygiene, in German universities. They were taking a short tour through a portion of Canada after attending the recent International Congress of Hygiene in Washington.

Mayor Geary acted as Chairman and conducted the proceedings in his usual graceful manner. He said Toronto was honored in having the opportunity of welcoming many of the most eminent scientists in the world. We all rejoice in Canada that the great Empire of Germany lives in peace and amity with the Empire of Great Britain.

Long may it continue so. The arts of peace and the triumph of science would do better so long as the relationship continues as to-day.

"Die Wacht am Rhein," was sung lustily as the Mayor proposed a toast to his Majesty the Kaiser.

Mr. Gerhard Heintzman speaking in German, on behalf of the citizens of Toronto, alluded to the prospective trade compact between Germany and Canada. It is the desire that Canada and Germany shall be more closely related socially and commercially. The world had Germany to thank for a great deal.

Especially in matters of technical education and chemical research could Germany claim to be at the top of the ladder.

Dr. J. C. O. Hastings, Medical Officer of Health in Toronto, proposed the toast to "Our Guests."

Prof. His, of Berlin University, who was introduced as having conducted a clinic which was renowned the world over, said he had observed that Canada was a country stamped after the old English nation.

Prof. Leffler, Hygienist of Greifswald University, the discoverer of the bacillus of diphtheria, spoke in German, and quoted "Ships that Pass in the Night" as expressing the feelings of the delegation upon the thought of leaving Toronto.

Prof. Gaertner, of Jena, also speaking in his native tongue, said the medical profession in Canada had the reputation of being in its infancy; but he assured them that it had a world-wide reputation.

Toasting "the ladies," Dr. Adam Wright, of Toronto, made touching reference to the late Queen Victoria. "The woman we all loved and revered so much," he said, "was the grandmother of your great Emperor."

"We're cousins, and if matters were left to us, and the politicians would not interfere, we would be on good terms for the next thousand years."

This brief account of one of the most successful events that has ever occurred in Toronto does not commence to do justice to the occasion. The friendly spirit shown and the enthusiasm manifested by our German guests was as remarkable as it was indescribable. The *Toronto Globe* makes the following comments:

The 250 eminent German physicians and hygienists present enthusiastically joined in spontaneous "hochs" and "bravos" when local celebrities touched upon the desirability of a friendly relationship between the two Empires, and the "hochs" and "bravos" were as generously bestowed upon the German visitors who spoke flatteringly of Canada and of Toronto (they were all enamored of Toronto) and of the city's youthful Mayor and Controller Alf. Maguire, who had arranged and effected such an admirable reception and entertainment for them.

It is fairly well know to the doctors of Toronto, and we hope fairly well appreciated by them, that Controller Maguire has frequently during the last few years taken great interest in the entertainment of medical societies and travelling delegates. We may add that in showing his good will towards us his generosity is quite equalled by his ability to make any function that he manages "go with a hum."

THE CENTRAL REGISTRY EXTENSION FUND

This means a fund raised by a committee of graduate nurses of Toronto to assist in paying nurses their ordinary fees in cases where the people are unable to pay more than six, eight or ten dollars per week, although they might really need skilled nursing. After raising a certain amount of money they commenced operations. They sent out their first nurse in November, 1911, and during the next seven months they cared for nineteen patients. In several cases the illness was so serious that two nurses were sent.

It was feared by some that the committee in charge would frequently be imposed upon. We understand that up to the present time it is confidently believed that nothing of that sort has occurred. Many worthy people have been assisted, much suffering has been alleviated, and some lives have been saved. Miss Charlotte E. Eastwood, the head of the Victorian Order of Nurses, is the Convener of the Committee, Miss B. Crosby, the Treasurer, and Miss J. C. Wardell, the Secretary. The scheme is an admirable one, the committee is doing good work, and we hope it will get proper support from the wealthy people in Toronto.

CLINICAL CONGRESS OF SURGEONS OF NORTH AMERICA

As we announced in our July issue, the third Clinical Congress of Surgeons of North America will be held in New York City, November 11 to 16. The first meeting in Chicago in 1910, and the second in Philadelphia in 1911, were both remarkably successful, and we are informed that the New York meeting is likely to be even better than those preceding it. The headquarters of the Congress will be in the large ballroom of the Waldorf-Astoria Hotel.

THE ACTION OF BACTERIA IN THE INTESTINE

Ever since bacteriologists have recognized that some of the food products are broken up in the intestine by bacteria, the question has been raised whether

or not this kind of digestion was beneficent. As long ago as 1895, Nuttal and Thierfelder fed to guinea pigs, kept sterile from birth, food in which all bacterial life had been destroyed. The animals lived and grew, much as ordinary guinea pigs. This was in line with an important observation by Levin, in Sweden, that Arctic animals often had sterile intestinal contents. Another experimenter (Schottelius), however, found that sterile chickens lost steadily in weight when kept on sterile food, but picked up again when given ordinary rations.

These two sets of experiments show how the physiological world is divided. On the one hand we have those who hold that bacteria are absolutely necessary for healthy, human life; on the other, we have Metchnikoff and his school, who say that bacterial putrefaction is the occasion for constant danger to the organization. One English surgeon would go so far as to cut out the colon by a surgical operation, and an American surgeon sees in the colon bacillus Nature's method of regulating the population. Metchnikoff recommends sour milk to prolong life, because the ordinary intestinal flora do not flourish in the presence of lactic acid. The truth, as usual, probably lies between the two extremes. While the presence of bacteria confers no positive benefit upon the animal economy, the organism has adapted itself, under usual conditions, to minimize their pernicious influence. F. A. C.

ABSINTHE

An Act of Congress forbidding the importation of absinthe into the United States came into force October 1. Absinthe was introduced into France at the

close of the Algerian war. France consumes more absinthe than all the rest of the world combined, and the consumption is increasing so rapidly that many scientists and laymen in that country are becoming seriously alarmed.

The chief ingredient in absinthe is derived from the wormwood plant. A small percentage of opium is added, and there are other ingredients, some alcoholic, and some not. It tastes something like paregoric, and seems quite harmless to those who drink a little of it for the first time. Many of the French people add enough sugar to it to make a syrup, which they slowly sip, taking sometimes an hour for a single drink. The real absinthe fiend takes it "neat." To such a one the result is death or insanity within a short time.

One of the peculiarities in absinthe is that, unlike all other kinds of alcohol, its first action is on the nerves, passing on to the brain. The after effects of a debauch on absinthe are far more serious than those following a whiskey spree. After the drinking of absinthe the effects in many cases do not manifest themselves for some time, and a man may drink two or three glasses and go about his business as though nothing had happened for several hours, then suddenly serious symptoms appear. These symptoms vary much, but among them are hallucinations of vision and hearing, irritation, melancholy, convulsions.

We are told by the *Toronto Mail and Empire* that the United States is not the first country to prohibit the importation, manufacture and sale of absinthe. Belgium was the first country to prohibit its use, in 1906, because its large French-speaking population

were becoming fond of it. Among the other countries which have since prohibited its use are Switzerland, Holland and Brazil. France, however, is imposing only slight restrictions, which will have little or no effect on the consumption of the drug. If the absinthe habit grows in coming years, it will require "a disturbance bordering on a revolution to free the country from the green monster that is so firmly coiled about it."

EDITORIAL NOTES

A German delegate to the Hygiene Congress at Washington said that the art of cooking has declined, and that in truth food is not prepared as it was when "mother did the cooking."

Major R. W. Leonard, Chairman of the Trancontinental Railway Commission, when in Kingston recently, in company with Dr. J. Connell, paid a visit to the Sir Oliver Mowat Memorial Tuberculosis Hospital. He was so pleased with his visit that he has forwarded to Dr. Connell a cheque for $800 to be devoted to the erection of a cottage on the grounds, and to be known as the "Rowland Cottage" in memory of his wife's family.

The Dominion Medical Council

The first meeting to organize the new Dominion Medical Council has been summoned by Hon. Dr. Roche, Secretary of State, to meet in Ottawa on Thursday, November 7. The meeting is to comprise representatives of the several provincial medical councils, representatives of the universities, representatives of the homœopathic physicians, and three members yet to be appointed by order-in-Council. The Canada Medical Health Act was passed in 1902, after years of effort, by Dr. Roddick, formerly M.P. for one of the divisions of Montreal. It could not go into effect until all the provincial legislatures had approved it, and this has taken ten years. Now the way lies open to the formation of a Dominion Council, and the formulating of rules regarding examinations, etc. The Act commits the work of organization to the Minister of Agriculture, but Mr. Burrell has asked Dr. Roche to take it over, he having been one of the champions of the Act when it was before the House.

The delegates from the provincial councils are: Ontario—Dr. W. Spankie, Wolfe Island; Dr. R. J. Gibson, Sault Ste. Marie. Quebec—Dr. L. P. Norman, Three Rivers; Dr. Arthur Simard, 59, Rue d'Antenial, Quebec. New Brunswick—Dr. A. B. Atherton, Fredericton; Dr. Walter A. White, St. John. Nova Scotia—Dr. A. W. H. Lindsay, Halifax; Dr. John Stewart, Halifax. Manitoba—Dr. R. S. Thornton, Del-

oraine; Dr. J. S. Gray, Winnipeg. Alberta—Dr. R. G. Brett, Banff; Dr. John Park, Edmonton. British Columbia—Dr. R. E. McKechnie, Vancouver; Dr. R. E. Walker, New Westminster. Those of Prince Edward Island and Saskatchewan have not yet been selected.

The representatives of the universities are: Dalhousie—Dr. D. Fraser Harris, Halifax. Manitoba—Dr. J. R. Jones, Winnipeg. Queen's—Dr. J. C. Connell, Kingston. Western—Dr. H. H. McCallum, London. Laval, Montreal—Dr. E. P. Lachapelle, Montreal. Laval, Quebec—Dr. D. Brocher, Quebec. McGill—Dr. F. J. Shepherd, Montreal. Toronto—Dr. J. M. McCallum, Toronto.

The representatives of the homœopathic body are: Manitoba—Dr. Chas. E. Sugden, Winnipeg. Ontario—Dr. E. A. P. Hardy, Toronto. Quebec—Dr. E. M. Morgan, Montreal.

Personals.

The Pope's physician, Dr. Giuseppe Petacci, died September 29th, 1912.

Dr. Smirlie Lawson has returned from New York to Toronto.

Dr. J. H. Elliott has removed from 611 Spadina Avenue to 11 Spadina Road, Toronto.

Dr. George Elliott, of Toronto, has removed from Beverley Street to 219 Spadina Road.

Dr. Charles W. F. Gorrell has been elected President of the Ottawa Medical Society for the ensuing year.

Dr. Bruce Hewson (Trinity, '95), who practised in Colborne for several years, has removed to Peterboro'.

Dr. George W. Badgerow, of London, England, paid a visit to his friends in Toronto about the middle of September.

Sir Lambert Ormsby, the well-known surgeon of Dublin, Ireland, spent a couple of days in Toronto, October, 8 and 9.

Dr. M. D. B. Kinsella, formerly of North Bay, and lately of Toronto, has moved to Mattawa, where he will engage in general practice.

Dr. John C. Calhoun, House Surgeon at the Manhattan Eye, Ear and Throat Hospital, New York (1909-1912), has opened offices at 16 Bloor Street West.

The German doctors who recently visited Toronto and Montreal, after the International Health Congress in Washington, sailed from New York for Germany, October 11th.

Dr. Roland Hill (Tor. '90), who was in St. Louis for a time, and later in the University of Minnesota, has been appointed Superintendent of the Hygienic Institute, London, Ont.

Professor Alfred Baker, head of the Department of Mathematics in the University of Toronto, has been appointed Dean of the Faculty of Arts in the place of Professor Ramsay Wright, resigned.

The first meeting of the Æsculapian Club of Toronto for this season, was held in the Albany Club, October 10th, when Sir George Ross delivered a very able and eloquent address on "Canada."

The practice carried on heretofore by Drs. Oldright and Mackenzie will be continued at corner of Carlton Street and Homewood Avenue, by Dr. Mackenzie. Dr. Oldright will, in the future, confine himself to practice in consultation.

Dr. A. T. Willinsky, 189 College Street, Toronto, wishes to announce to the medical profession that he has installed a complete and modern X-ray outfit, including Groedel's Orthodiagraph. He is now prepared to undertake any branch of radiology or electrotherapy.

The many friends of Dr. Robert A. Stevenson, of Toronto, will be grieved to learn that, in the latter part of September he was seriously ill in London, England. It is supposed that he had some form of thrombosis in the leg, resulting in gangrene. An amputation was performed at or near the knee joint, on October 12th.

Dr. Fred. Fenton, of Toronto, started on an automobile trip through some of the Eastern States, September 13th. Somewhere between New York and Boston he became very ill from a serious cholera morbus, very much like the old Asiatic cholera. Dr. J. A. Roberts went down to see him. After a few days he brought Dr. and Mrs. Fenton back to Toronto. Dr. Fenton recovered more quickly than was expected, and was able to go out in his motor car on October 3rd.

The Central Prison Farm at Guelph, had a distinguished visitor in the person of Mr. Mitchell Innes, attache of the British Embassy at Washington. Mr. Innes visited Ontario for the purpose of investigating the methods employed at the Central Prison Farm, and will report direct to the English Government. Hon. Mr. Hanna, S. A. Armstrong, Assistant Provincial Secretary, and Dr. Gilmour accompanied Mr. Innes to Guelph, and explained the workings of the institution.

Sir Hector Cameron, Emeritus Professor of Clinical Surgery in the University of Glasgow, visited Toronto, October 2nd, and was the guest of Mr. Irving Cameron for about four weeks. He delivered the opening lecture to the University Medical Faculty, October 4th. He was entertained at dinner by the Medical Faculty, and, in addition to many private functions, was one of the guests of honor at the first meeting of the Æsculapian Club for the season 1912-13. We understand that Sir Hector considers that he formed some pleasant friendships, and left many friends behind him when he departed for home. He really, however, realizes only a portion of the truth. The medical profession of Toronto grew very fond of him, and he will have, so long as he lives, more friends and admirers in Toronto than he can ever know.

Obituary

C. T. WARD, M.D.

Dr. Ward, of Napanee, died suddenly, July 27th. He graduated M.D. from Queen's University in 1879.

G. E. MARSHALL, M.D.

Dr. Marshall, of Peterborough, died suddenly while engaged in a bowling tournament, August 5th, aged 48.

FREDERICK C. BOYD, M.D.

Dr. F. C. Boyd, of Kingston, died from tuberculosis, July 5th, aged 24. He graduated M.D. from Queen's University, in 1911.

ALLEN CAMERON, M.D.

Dr. Cameron, of Owen Sound, died September 6th, aged 83. He graduated M.D. from the University of Glasgow in 1853, and came to Canada in 1855.

JOHN ODLUM, M.D.

Dr. John Odlum, of Woodstock, died June 27th. He graduated from Queen's in 1880. After practising in Embro for a few years he removed to Woodstock in 1886, where he practised until ill-health came to him several months ago.

DAVID ROBERTSON, M.D.

Dr. D. Robertson, of Milton, died at Nelson, B.C., August 9th, aged 71. He graduated from McGill in 1864, and practised about thirty years in Milton. He was a member of the Provincial Legislature for Halton, from 1874 to 1884. He was appointed Registrar for the County of Halton in 1898.

HON. JOHN H. WILSON, M.D.

Senator J. H. Wilson, M.D., of St. Thomas, died at his home, July 3rd, aged 79. He represented East Elgin in the Ontario Legislature from 1871 to 1879, and in the House of Commons from 1882 to 1891. He was made a Senator in 1904. He graduated from Victoria in 1858. Soon after graduating he went to St. Thomas, where he practised up to the time of his last illness.

NOBLE BENJAMIN DEAN, M.D.

Dr. N. B. Dean died at his home in Brighton, Ont., June 28th, aged 72. He received the degree of M.D. from Victoria University when only twenty years of age, in 1860. After practising in Beaverton for a short time, he went to the United States, and acted as surgeon in the Northern Army. At the close of the war he returned to Canada and practised in Brighton up to the time of his last illness. He was widely known and very popular among all classes. One of his sons is Dr. Marshall B. Dean, who graduated from Toronto University in 1899, and is now practising in Fort William.

Book Reviews.

Kidney Diseases. By W. P. Herringham, M.D., F.R.C.P., Physician to St. Bartholomew's Hospital, etc., etc., with chapters on Renal Diseases in Pregnancy, by Herbert Williamson, M.D., F.R.C.P., Assistant-Physician-Accoucheur to St. Bartholomew's Hospital, etc., etc. London: Henry Frowde, Oxford University Press. 1912.

This, the latest of the Oxford medical publications, is a work that we are sure no one can read without wishing that more of our writers of medical literature would follow the example set by Dr. Herringham. The many years of painstaking work which Dr. Herringham has spent at St. Bartholomew's Hospital have enabled him to produce a monograph on diseases of the kidney which is a treat to read. From the purely scientific aspect some would, perhaps, criticize the writer for the brief way in which he dismisses certain problems which are always to the fore in connection with the renal system. But after all why load a book up with material of which no one is sure, and clinically is of no proved value? In the delightful personal directness manifested throughout the book it is simply stated in these connections that "we do not know."

The opening chapters on normal and abnormal renal constituents are to be commended for the clear and lucid way in which the problems are presented. The best parts of the whole book are the chapters on nephritis. They are replete with histories bearing on the points in question, and give a personality to the work which is decidedly refreshing. The chapter on the treatment of nephritis forms an excellent guide for the therapeutist, and contains many helpful suggestions.

The author is fortunate in his choice of such a collaborator as Dr. Williamson, who in a few chapters has presented the subject of renal disease and pregnancy in a masterly fashion. Such a book as this fulfills two great purposes It is not only one of the very best books we have ever seen on the subject itself, but it is an object lesson to others on the way a book should be written. It is not merely a collection of facts gathered from various sources and put together to form a book. The author, a clinician of wide experience, has impressed his personality on every sentence. It is *his* book, and he has presented his subject in a style simple, direct, dogmatic perhaps at times, but assertive. After reading it one knows one has profited greatly.

The Practitioner's Encyclopædia of Medicine and Surgery, in all their Branches. Edited by J. Keogh Murphy, M.C., F.R.C.S., Surgeon, Miller General Hospital for South-East London, Senior Assistant Surgeon to Paddington Green Children's Hospital. 1,443 pages, with illustrations. Price, $8.00. London: Oxford University Press. Toronto: D. T. McAinsh & Co.

In these days of so much advance in every department of medical science, it is impossible for any one man to obtain a complete grasp of all the new work which is constantly confronting him in the medical journals. Nevertheless, the general public expect their physician to be an omniscient being. To enable one to keep abreast with the times such a work as this is a necessity. Within its 1,400 or more pages are contained articles dealing with every branch and department of medicine. These have been written by men eminent in their respective specialties, and written with the object of being of direct service to the general practitioner. Diagnosis and treatment are emphasized throughout, while theoretical considerations have been reduced to a minimum. An idea of the extent of work covered can be gained from the index, which includes General Medicine, Diseases of Children, Life Insurance, Clinical Pathology, Legal Medicine, Mental Disorders, Anæsthetics, General Surgery, Obstetrics, and Gynæcology, Diseases of the Eye, Ear, Nose, and Throat, Dermatology and special forms of Treatment as Radium Therapy, Tonic Medication, etc. This encyclopædia forms one of the best works of reference we have seen.

Elements of Practical Medicine. By Alfred H. Carter, M.D., M.Sc., F.R.C.P., London. Professor of Medicine, University of Burmingham. Tenth edition. London: H. K. Lewis, 136 Gower Street, W.C. 1912.

When a book has reached its tenth edition one may be sure that it is because it fills a place that is needed among medical textbooks. This work is an excellent handbook of the practice of medicine, and is admirable for the student who is obtaining his first introduction to that science. Stress is laid on general principles, which are so needful for the beginner. The section on dermatology has been edited by Dr. Douglas Heath. Not

the least admirable feature of this popular work is the therapeutic index at the back of the book.

Progressive Medicine, a quarterly digest of advances, discoveries and improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College, Philadelphia; assisted by LEIGHTON F. APPLEMAN, M.D., Ophthalmologist to the Frederick Douglass Memorial Hospital; Instructor in Ophthalmology, Philadelphia Polyclinic Hospital and College for Graduates in Medicine. Vol. 3, September, 1912. Diseases of the Thorax and its Viscera, including the Heart, Lungs, and Blood Vessels—Dermatology and Syphilis—Obstetrics—Diseases of the Nervous Systems. Lea & Febiger, Philadelphia and New York. 1912.

There are four sections in volume three, and each one of them is a masterpiece. Without appearing too partial in choosing the best, we believe that Dr. Ewart's discussion of the diseases of the thorax cannot be duplicated in the English language. It is always a wonder how any practitioner who wants to keep abreast of the times can get along without Progressive Medicine.

The Practice of Medicine. A Manual for Students and Practitioners. By HUGHES DAYTON, M.D., formerly of the Cornell University Medical School, New York. New (2nd) edition, thoroughly revised. 12mo, 326 pages. Cloth, $1.00, net. *The Medical Epitome Series.* Lea & Febiger, Publishers, Philadelphia and New York. 1912.

From the number of epitomes appearing, it is evident there is a great demand for them on this side of the water. While every teacher recognizes that such short cuts are dangerous in the hands of careless students, yet compends have their uses, and the fact that this particular one has reached the second edition, shows that it is among the best. The work is thoroughly up to date, and one which can safely be recommended when read in conjunction with a larger textbook.

An Essay on Hasheesh, including observations and experiments. By Victor Robinson, Contributing Editor, Medical Review of Reviews, etc. Medical Review of Reviews, 206 Broadway, New York. 1912. Price, fifty cents, postpaid.

This is a delightful little monograph for the busy doctor to read in a spare moment. The actions of the drug are described in a series of vivid word pictures—such observations are often of more interest than those carried out in a purely pharmacological fashion. It should be on the book shelf along with De Quincey's "Confessions of an Opium Eater."

Lessons on Massage. By Margaret D. Palmer, formerly Masseuse and Manager of the Massage Department of the London Hospital, and Instructor of Massage to the Nursing Staff; a founder of, and examiner to, the Incorporated Society of Trained Masseuses. Fourth edition. Bailliere, Tindall & Cox, 8 Henrietta Street, Covent Garden, London. 1912.

That the present work is the fourth edition speaks favorably of this book as a textbook on massage. After introductory chapters on the history of the method and general definitions, the various regions of the body are taken up in detail, beginning with brief discussions of the anatomy and physiology, and going on to teach the various methods of massage suitable to the part in question. The changes from earlier editions are in the illustrations, of which many are new, and are larger and clearer. There is also added an appendix giving the new anatomical terms introduced by the Basle Convention.

For nurses and those engaged in the work we consider this an excellent guide book, and the physician, too, will profit by the careful study of a subject of which he is often sadly ignorant.

THE CANADIAN PUBLIC HEALTH ASSOCIATION, SECOND ANNUAL MEETING, TORONTO, SEPTEMBER 16, 17, 18, 1912.

We are unable to give a complete report of this meeting. There was so much work done in the sections, in addition to that during the general sessions, that it will take time to compile anything like a full account of the proceedings, if, indeed, such an undertaking is ever accomplished. We have, however, culled excerpts from the following Toronto newspapers, the *Globe, Telegram, News,* and *Mail,* and putting them together have constructed a patchwork report which our readers will find very interesting.

The President's Address.

"Health is not only a matter for municipal and provincial consideration," said Dr. C. A. Hodgetts, medical adviser of the Commission of Conservation, in his address as President of the Canadian Health Association. "It should also be dealt with by each national Government. A national Government," he went on to say, "should give direct attention to public health under a bureau because such a Government would have at its command greater resources for the study of the relation of its people to their environment, animate and inanimate, than the provinces or municipalities. Moreover, it could co-ordinate the work of the various lesser authorities and co-operate with them." Dr. Hodgetts referred to one problem before Canada, namely, the inspection of the thousands of immigrants entering the country. "If the people of this country are satisfied," he said, "with a medical examination of several hundred persons, often speaking a foreign language, in a few hours by one or two medical men, then they are willing to face a danger which, I believe, will show itself in the near future if, indeed, it is not already manifesting itself." This question alone, he believed, provided sufficient argument to justify the establishment of a federal bureau of health. Moreover, there remained to be evolved a scheme for the co-ordination of public health work on Imperial lines. It was necessary that every nation of the Empire should play its part in building up the highest type of citizens and provide men and women physically fit to hold their own in the commercial struggle which was not likely to become less strenuous as years passed by.

Dr. Hodgetts said that Canadians were but following Great Britain in public health and were not profiting by that coun-

try's errors. The reason was that Canadians were ignorant of health laws; municipal councillors lived only to retain office. He drew attention to the need for better housing conditions. He also criticized the Ontario College of Physicians and Surgeons because it did not require a student to show any knowledge of hygiene in his final examination. That body, he felt, had not risen to a realization of the fact that the primary object of the practice of medicine was to prevent rather than to cure sickness.

"Canada has entered upon the race for national existence," said Dr. Hodgetts, "a link in the chain of those nations which compose the greatest earth-girdling composite empire which has ever been known. Each portion of this great empire is to-day laying the foundations of the Greater Britain in order to ensure its perpetuity, and to this end the attention of governments and of the people themselves is being directed to many of the important factors entering into this, to us, great empire-building problem of the twentieth century.

"For instance, we are considering from an imperial point of view such problems as those of trade, commerce, tariffs, and particularly the two great preventives of that international disease commonly known as 'war,' but more accurately described as 'hell.' I refer to the navy and the army, for which we are willing to tax ourselves, some in one way, some in another, and all for the sake of maintaining imperial peace and unity. But with all this bluster and fuss, with all this very unnecessary display of patriotism and imperialism, what are any of the governments which are fussing and fuming in an endeavor to weld this chain of empire together doing in a systematic manner for that prime essential of empire—the people themselves and their physical environment."

In the consolidation of empire Dr. Hodgetts declared that public health was the greatest of all subjects to be considered and worked out. The history of public health in Canada was but a repetition of the work done in Great Britain.

"We have," said Dr. Hodgetts, "followed them like sheep, though a long way off, instead of profiting by their errors. We have not enacted legislation for preventing what we know by their experience can be prevented. The reason for this is not difficult to find: our people are ignorant of health laws; our municipal councillors, as a rule, live for no higher object than to maintain their civic office by voting along those lines which will secure the greatest return of votes; in short, our politicians

are not statesmen. Indeed, a statesman is now a *rara avis,* for our legislators have no more brains or judgment beyond the referendum, which is simply the *cloaca maxima* into which too often the recommendations of a statesman are precipitated by the politician who plays on the ignorance of the average citizen to accomplish his nefarious ends.

"We have before us the evidence that bad town planning and housing lead inevitably to increased municipal expenditure, and therefore higher taxes. We know that under inefficient legislation bad housing conditions grow up and continue, and that, owing to these evil environments disease, crime, immorality and poverty, resulting in physical degeneration, inevitably result. Yet here we are planning towns and towns by the hundred each year, building—rather, I should say, throwing together—houses, and, worse than all, permitting a foreign element to live in worse conditions than would be permitted in their own country, and there is no legislature in Canada which has a statesman within its walls of the calibre to propose a bill which will, in my judgment, adequately meet this alarming and awful situation.

"Sufficient has been indicated to show that, as a nation, Canada has a long way to travel yet before the claim can be advanced that it is doing its share to produce a virile race, leave alone the still more important questions of maintaining its virility."

Relation of the Hospital to the Community and Public Health.

The above subject was taken up by Dr. Bruce Smith, Inspector of Hospitals and Public Charities for Ontario. The growth of hospital sentiment in Canada was first referred to, and interesting figures quoted to show the large increase in the number of hospitals and the expenditures made for hospital maintenance.

Methods of construction and the economic principles found by experience best adapted for hospital management in Canada were referred to.

MUNICIPAL HOSPITALS.

With no uncertain sound Dr. Smith expressed his opinions regarding municipal hospitals.

"Ward politics are decidedly imcompatible with general

hospital management," he stated. The contrast between municipal hospitals and those institutions which are controlled and directed by local boards is most marked. There is always a discordant note from the executive side of the municipal institution. Everywhere are seen the finger prints of the politician; the ward boss and the political heeler exert their baneful influence without check or scruple. Tenure of office for the chief executive rests on his status as a henchman rather than on his moral or intellectual fitness. The value of experience and training are either entirely lost sight of or given secondary consideration. Staff appointments are distributed for personal or political reasons rather than for professional worth.

"Fortunately in this country we have not the experience which has been so expensive in some of the American cities during the past few years. There are only two or three what might be termed municipal hospitals in Canada. Where these are located there is an absence of the hospital spirit among the people of the community. Local philanthropy is never exercised for the benefit of such hospitals. It would, indeed, be a surprise to receive a contribution or become the object of a bequest. Not only is the hospital deprived of the contributions and sympathy of the people of the community, but the greater privilege of giving is kept from those who would otherwise find comfort and delight in practical benevolence.

"There are one or two places in Ontario where the people would as soon think of making a donation to the City Hall or to the street railway as to the local hospital under municipal control and management. There is no room in Canada for more hospitals solely under municipal control. The ideal plan is, as so largely prevails in Canada, local management under the direction of those who are actuated by a spirit of philanthropy coupled with civic pride, and are willing to administer the important trust committed to their care. These local boards, however, deserve and must receive liberal municipal support. The Municipal Act of Ontario gives power to vote an annual grant each year for hospital support.

"Every city, town, village, township and county council can exercise that power. Some of the municipalities make liberal grants towards the support of the hospitals in their midst. Unfortunately, there are many that will not take advantage of the power they possess to vote hospital grants, and some few municipalities have hitherto declined to contribute anything towards paying for the hospital care and treatment their indigent patients receive.

"The time has come when municipalities should be awakened to a sense of the duty they owe to the local hospitals who care for their sick poor. At the last session of the Legislature public hospitals in Ontario were given the power to charge municipalities a sum not exceeding one dollar per day for the maintenance of indigent patients received therefrom. In the case, however, of many of the hospitals in this Province, liberal municipal grants are given, and an agreement entered into by which all indigent patients from such municipalities are treated free."

Alluding to the question of the relation of medical men to the patients admitted to a hospital, Dr. Smith made his opinion very plain. He said:—

"We sometimes hear a great deal of criticism of the rule which prevents every medical man having access to the public wards of a hospital, but those who are acquainted with hospital management know that to permit such a course is inimical to the patient and disastrous to the management and discipline of the hospital. It is along such lines, and to bring about such conditions that the ward politician gloats over the prospect of posing as the poor man's friend. The public is, fortunately, not seriously led away with such buncombe. Every patient admitted to the public ward of a hospital is so admitted because of his or her inability to pay for the medical and surgical care required. This is to be provided free.

"The financial loss to the medical attendant is nothing, for the patient is unable to pay anything and is therefore a deserving object of charity. I have before me the records of two hospitals. In one there is proper authority shown in guarding the work of the staff and protecting the patient's interest; in the other there is deplorable laxity and little attempt made to discriminate in the selection of the staff.

"In the one hospital last year there were 104 operations for appendicitis without a single death, while in the other hospital there were 84 operations for appendicitis and 16 deaths. All this talk about a hospital board not being justified in selecting its staff, for whose work it is responsible, is both misleading and dangerous. A regularly organized staff is essential then to every hospital, and the poor man when admitted to the public wards has the right to expect that all the skill of the staff, as well as all the facilities of the institution, will be exercised on his behalf. He can best obtain these by methodical arrangements of the ward service.

"Take a public ward of 24 beds, and allow each patient to

be followed thereto by the physician or surgeon of his own choice, the usual visiting hours being observed, imagine the confusion, out of which provoking errors would be sure to arise, and picture to yourself the difficulty of providing a nursing staff that would be adequate for such conditions.

"The few who have advocated the expediency of establishing city hospitals where every medical man might follow his indigent patients and treat them in public wards have, I fear, not given the matter the consideration which such a radical change should have. The medical and surgical staff of a hospital must be selected by the trustees of the institution without regard to sectional or partisan feelings and from the best available physicians and surgeons in the community.

"Under the Hospital Act of Ontario all hospital regulations are subject to approval by the Lieutenant-Governor-in-Council. Exclusive cliques that engender professional snobbery must be discouraged, and the hospital board that falls under such an influence makes a huge mistake. The free patient must be made to feel that those charged by the community with the selection of the visiting staff have endeavored to provide the best men available. Those thus selected must on their part render regular and faithful attendance, and be given to understand that neglect of duty is tantamount to an expression of a desire to be relieved from membership of the staff."

How to Lessen Social Misery.

Social workers gathered in their section to discuss such subjects as the prevention of social misery. J. Howard T. Falk, general secretary of the Associated Charities of Winnipeg, spoke upon that particular topic and expressed the view that charities, well-intentioned as they might be, had done more to prevent the coming of better conditions than anything else. Economic reform would tend to equalize the rewards of labor, but would come slowly as the gulf between employer and employee was bridged and as the Christian religion abandoned its dogma and began actually to establish the brotherhood of man. Mr. Falk urged the need not only of employment bureaus, but of information bureaus to make public the demand and supply of labor. Compulsory registration of employers seeking men and men seeking employment would be invaluable to the prosperity of the Dominion. Federal, provincial and municipal

governments would be wise also to undertake public works and let contracts only at times when private employers were slack. Mr. Falk criticised the method of distribution of casual work. The homeless man was taught to depend on casual work and the married man was left idle.

REFORM TAXATION.

Mr. G. Frank Beer was called upon by Dr. Helen MacMurchy, who presided. He said that pressure should be brought on governments to turn millions now going to enrich those who needed no money into right channels. Then it would not be necessary for ladies to tramp about collecting for homes or for health officers to beg for appropriations to make their departments efficient. By changes, new methods of taxation, by increase of inheritance taxes, he declared, communities would be enabled to meet their social responsibilities.

Rev. Father Minehan declared that a benevolent despotism should teach all mothers how to care for their babes. He believed that those who drew high rent from houses whose unsanitary condition caused disease and death were guilty of manslaughter and he advocated the use of the cudgel in the early stages of inebriates.

Rabbi Jacobs as a dictator, would compel wealthy men to contribute more liberally to social reform. Mr. Lee, secretary of the immigration department of the Y.M.C.A. at Quebec, would establish employment bureaus for the distribution of casual labor, and Mr. Smith, general supervisor of Toronto playgrounds would bring smiles to sad faces and light in dark places in order that men and women might not lose the spirit of play and become nervous wrecks.

The relations of mistress and maid were dealt with. Mrs. L. A. Hamilton, Lorne Park, said that much of the misery in domestic service was due to loneliness, and that the maid should have a comfortable sitting room in which to entertain her friends. She also favored the formation of a Mistress' Association to standardize wages and of domestic service clubs with supervised recreation grounds. Miss Yates of the McDonald Institute, Guelph, said that many servants were required to work in unsanitary kitchens with evil-smelling refrigerators. Dr. T. F. McMahon and Rev. Daniel Strachan were pleased to hear pleas for greater leisure for domestics, and Prof. Stevenson wished that the classes in the domestic science course at the University of Toronto were open in the evening, so that domestic servants might attend.

VENTILATE SCHOOLS.

Dr. J. H. Elliott raised the question of the prevention of infection of children with tuberculosis. The infant might easily be infected through careless handling by the tuberculous parent. He also recommended a greater use of open-air schools than at present. If such schools brought health and keen intellect to the sick, weak child, it would surely prevent the development of disease in the healthy child. In these views, Dr. John Noble, of the Board of Education, concurred: "There isn't a school in Toronto that is properly ventilated," he said, "and the churches are worse." Mr. John Ross Robertson cited the beneficial results which had attended the treatment of children at the Lakeside Home at the Island.

He said in the wing to be added to the Hospital for Sick Children by means of the grant of $250,000 to be given by the city, there would be a roof garden, where children would be given open-air treatment all the year round.

Dr. W. E. Struthers, Toronto's Chief Medical Inspector of Schools, said that the great aim of medical inspection of schools should be the prevention of disease. The children should be taught the laws of health, and the home should be brought into closer touch with the schools. In the strenuous life of the present it made little difference how bright a child was if it lacked physical strength to stand the strain of modern business or professional life.

Miss Lina Rogers, superintendent of the nurses of the city public schools, spoke of the work being done by the ladies in her department.

PURE MILK.

The problem of securing pure milk and food for cities and towns was discussed at length by the section presided over by Andrew R. B. Richmond, V.S. To ensure pure milk Dr. G. G. Nasmith, director of the Toronto Laboratory, suggested that depots be established to which sterilized cans for the reception of the supply might be sent. He said that in one year inspection of milk in Toronto had reduced the quantity of water used as an adulterant from forty per cent. to ten per cent., and had saved the people $300,000 formerly paid each year for water. He also pointed out that carriers often used rusty cans, cans in which leaks were stopped with soap, and cans in the tops of which holes had been made large enough to admit dust and bacteria. Dr. T. H. Whitelaw, medical officer of health of

Edmonton, said that consumers should be educated to return bottles in a sanitary condition. There should be a clearly defined by-law, enough inspectors, a well-equipped laboratory and courts ready to impose fines on breakers of rules and dealers who neglected the requirements of sanitation. Dr. Grange, of Toronto, favored the clipping of cows.

DANGER FROM TUBERCULOUS CATTLE.

In his paper on municipal food inspection Chief Inspector Robert Awde, of Toronto, dealt with the danger from tuberculous cattle. The only way to escape that danger was to provide for the erection of large public abattoirs and to close all private slaughter-houses. This end could only be attained by a Dominion-wide educational campaign which would lead to the pasage of legislation permitting provinces and municipalities to erect abattoirs and prevent the importation of dressed meat without the stamp of legalized inspection.

Mr. L. A. Wilson, chief inspector for the Dominion Government in Toronto, gave the record of beasts slaughtered and carcasses condemned in the city. In all 887,944 animals were slaughtered during the past year; 1,608 carcasses and 212,935 portions of carcasses were condemned.

S. R. B. Richmond said that Toronto had made the only attempt at an organized meat inspection scheme in the country. That system was still inadequate for lack of regulations governing the markets, hours of killing, and the private abattoirs. He had great hopes that in the municipal abattoir to be erected the city would have an agency for the protection of the meat supply and the reduction of prices.

HOW TO COMBAT TUBERCULOSIS.

Expressing agreement with the saying: "Every nation has the tuberculosis it deserves," Dr. J. H. Elliott, of Toronto, in his symposium, "Tuberculosis," pointed out how, by the application of present day knowledge this dread disease might be reduced to a minimum and the death rate in Canada materially lessened.

One thing to be remembered, observed Dr. Elliott, was that the disease was never hereditary but always an infection from some open case. To be successful the case must be located and many methods employed. The physician and householder should report all known cases. It would be ideal if the physician could

deal with the well-to-do cases and the municipal authority through the health department with the poor cases. In each case the infected source should be sought and properly dealt with.

Speaking generally, the "careful," open case might remain at home under supervision with an increasing degree of isolation should the disease advance, but the "careless" case should leave home. It was especially necessary to remove children from contact with open cases.

INSTITUTIONAL TREATMENT.

Advocating the institutional treatment of cases Dr. Elliott remarked that the advanced case, ill at home, was the greatest source of infection. The family were in intimate contact with the sick one, and unless extreme care was observed infection easily occurred. Children being especially susceptible must be guarded and rigidly excluded from the sick room.

"A well-equipped and well-officered hospital offers so many advantages over the average home," remarked Dr. Elliott, "that there is not, as a rule, much difficulty in persuading a patient to enter for care and treatment if not far from the home. Every large municipality should provide such an institution aided by private philanthropy. In Ontario the building and maintenance of such an hospital is made very easy through the provincial aid which is granted under the Sanatorium Act, and there is no more important step a community can take in its efforts to combat tuberculosis."

HOUSING QUESTION IMPORTANT.

"The housing question must occupy an important position in any preventive programme," proceeded Dr. Elliott, "and the co-operation of architects and the adoption of proper legislation regarding the dwellings of the poor, workshops, offices, lodging houses and schools will be of service. Tuberculosis, though an infection, is often due to faulty social conditions, decidedly so when occuring amongst the poor. A large number receive infection when in childhood, hence it is highly important that the growing child, above all others, shall have a healthy environment and that the child whose general health is such as to suggest infection should have special care."

"Experience goes to show," said Dr. Elliott, concluding, "that the incidence of tuberculosis is practically proportionate

to our neglect of hygiene living and to existing social conditions. With improved social and hygienic conditions there may be a markedly lessened death rate."

SEWAGE CONTAMINATION.

In an address on "storm and surface water drainage in relation to sewage disposal," Mr. R. R. Knight, C.E., said that in the case of extraordinary rain storms, the first flush of storm water from a sewer is of a very foul nature and is one of the most dangerous forms of water pollution. It consists of that portion of the rainfall which finds its way into the sewers, and from the standpoint of a pure water supply needs treatment in some efficient manner.

In conclusion he pointed out the necessity for municipalities to act on this vital question, and so prevent a contaminating evil which ranks a close second to sewage itself."

TORONTO'S MILK.

Some alarming statements as to the milk that Toronto babies were drinking throughout the past year were aired this morning in connection with discussing the history of milk problems, and the evolution of this food from half and half to seven-eighths of nourishment.

"The story of milk inspection in Toronto is one of evolution," declared Dr. G. G. Nasmith. "July, 1911, heralded the systematic campaign. The steps of the work were then explained and the results found.

"A year ago," he declared, "we found 40 per cent. of the milk adulterated with water. At the end of the year we had reduced it to 10 per cent.

PAYING FOR WATER.

"Toronto people were actually paying out $300,000 annually for water, believing it to be milk. If they wish they can now buy three pints of milk add two pints of water and get the same quantity of milk they were getting a year ago.

Dairymen united with the city in the effort because they could not sell the city milk brought in.

"At present two veterinarians visit the farms of the 1,800 milk producers of Toronto. You can see at once the hopeless-

ness of the problem," urged Dr. Nasmith, when these producers were within a 100-mile radius of the city.

He then detailed the requirements of the inspectors.

"The one thing that we try to keep in mind is that we are here to see that the people get the pure milk that they pay for.

"The 'cowy' taste that people find in milk is a sure sign that it is impure."

Some difficulties were occasioned by the small man who surreptitiously peddled milk in the early morn and the large man whose sterilizing apparatus looked all right, but was not.

The milk supply was now far superior to that ever before obtained.

DISEASED MEAT.

"The way to end the sale of diseased meat, especially that infected with tuberculosis, is the erection of a large, inspected public abattoir, and the closing of all private slaughter-houses, and thus prevent the marketing of diseased meat by farmers and country butchers," declared Mr. Robert Awde, Chief Food Inspector of Toronto, in discussing the problem of pure food inspection.

TUBERCULOSIS INFECTION.

The chief sources of tuberculosis infection, as pointed out by Dr. J. H. Elliott, is the sputum.

"The child handled by a careless tuberculous parent may easily receive the infection into its system—handling sputum-soiled hands, the handkerchief, kissing, using an infected pillow, or in playing upon the patient's bed, or perhaps through inhaling the spray projected by coughing, sneezing or loud talking, or again playing on a filthy floor, all contribute to the danger of the little one's infection."

Dr. Elliott recommends a greater use of open-air schools than at present. He believes that all dwelling rooms and schools should be bright, airy and cheerful. In conclusion he stated that if open-air schools bring roses to the cheeks, flesh to the limbs and keenness to the intellect of the sick, weak child, let us have the same type of school to prevent the development of diseases which are now induced by stuffy, ill-ventilated rooms."

PREVENTION THE AIM.

The development of the children of to-day, the strength of the nation to come, was the inspiration of an educative address

by Dr. W. E. Struthers, Medical Inspector of Schools. The great aim of medical inspection of schools should be preventive medicine, not curative. The state looks upon its mines, forests and fisheries as great resources and spends enormous sums of money in developing these, but politicians forget the children of the state.

"The aim of school medical inspection is to give each child his inalienable birthright, a healthy body, a sound mind, and the duty of the state is to give this to each child.

"Health and education go hand in hand. The child has a claim upon the state and the state a claim upon the child. Public schools are a public trust. Education without health would be useless. The detection and stamping out of disease and the building up of the mental, moral and physical well-being of the child would express in brief the object of medical school inspection, and it was gratifying to learn that progress was being made."

The whole question of diet was discussed by Dr. H. B. Anderson, of the Faculty of Medicine of the University of Toronto. He opposed a purely vegetarian diet, but declared that excessive eating and drinking were far too common. People overloaded their stomachs and caused ills which made visits to bathing places necessary, and then returned to commit the same errors again. Eating between meals he condemned, and pointed out the evils of visits to ice-cream parlors, afternoon teas and taverns. He also emphasized the evil of faddist cures. The excessive use of any one class of food to the exclusion of a properly balanced diet was injurious. Dr. Anderson, like Dr. Hodgetts, favored the establishment of a Federal Department of Health with a national institute of hygiene in connection with it.

The Feeble Minded.

Plain speaking, and the exposure of things as they are, irrespective of public attitude, were noticeable in the closing session of the Canadian Health Congress. In his exposition of the mental condition of Ontario citizenship, Mr. Joseph P. Downey, Superintendent of the Ontario Home for Feeble Minded, spoke out firmly and authoritatively on the wave of idiocy and mental inefficiency which is not being stemmed in the Province to-day.

"There are at least 6,000 feeble-minded people in Ontario," he declared. "Of these probably one-third have been identi-

fied and are receiving some attention. But a great army remains to bear the penalties imposed upon them either in their own homes or herded with the criminal class for offences for which they should not be held either morally or legally responsible."

"The fact was that while the public recognized the pitiable wretches, who were outcasts on the streets or objects of contemptuous isolation in homes because of pronounced idiocy, it is only when a higher grade imbecile is committed for some offence that public attention is directed to his case.

"Not infrequently," declared Mr. Downey, "at Orillia they were called upon to support a woman and several children, whereas if she had been protected earlier the Province would have been spared the burden of maintaining another generation of imbeciles.

"There are now at Orillia thirty-nine families contributing two each, and seventeen families contributing five each."

In strong outspoken terms Mr. Downey denounced the present attitude of the public.

"The physically rugged child who can do chores at home or work for the neighbors receives little attention. She is probably regarded as stupid or dull-witted and is allowed to run her course until she becomes responsible for another generation of imbeciles.

"If in the next five years we could only place reasonably safe guardianship over the mental defectives of this Province, we would have laid the foundation for the gradual elimination of that unfortunate class.

The "marriage" situation aroused the speaker's indignation. It is quite a joke in the community, he declared, when the village softy enters into the bonds of wedlock with probably an equally defective partner. Such a union was a "pitiable tragedy."

"Other countries had taken radical steps to exclude the mentally incapable from marriage.

Mr. Downey suggested that the present Ontario Act should be revised and strengthened.

"Only by training in an institution could an idiot be helped. Restoration to normality was practically impossible."

Mr. Downey referred to methods suggested for the prevention of propagation of imbeciles, and said the day had arrived when these were discussed, and not in whispers.

"With the well-to-do and well-developed practising race

suicide and the paupers, degenerates and defectives revelling in the doubtful pleasure of large families, there is some ground for the eugenics movement," he argued.

"Eugenics was doing good in educating the people to look at heredity from a national point of view."

In conclusion he did not approve drastic or extreme measures, but discussion of them could not fail to do good.

"There are more applicants on the waiting list to the Orillia Hospital for Feeble Minded than on the York Club," commented Dr. Helen MacMurchy. "Six thousand imbeciles in Ontario means 3 for every 1,000 people." She quoted one case of a woman in Toronto feeble minded and now mother of seven idiot children and grandmother of three.

It is against the law to scatter typhoid fever. Should we not do something to stop feeble-mindedness?" she urged. She quoted further the case of a Toronto marriage where the preachers could not prevent it and the jeweller foisted it through.

The feeble-minded children of the state should be guarded by the state.

Dr. P. H. Bryce, Superintendent of Immigration, Ottawa, sounded a warning note to Canada at this morning's session of the Canadian Public Health Association held in the Physics Building, Toronto University, in regard to the cause of the increased cost of living, the insane rush to the city, and the intense fever for speculation.

"How shall Canada Save Her People from the Physical and Mental Degeneracy Due to Industrialism as seen in the Great Cities of Older Civilization?" was the subject of Dr. Bryce's address. He went fully into all the statistics of the Dominion as compared with other countries, showing that the increased cost of living in Canada is 27 per cent. United States had an increase of 29 per cent., Germany 40 per cent., France 20 per cent., and England 5 per cent. for the year.

In the speaker's opinion the prevention of the influx from the farm land to the city is the solution. He suggested the lessening of the cost of agricultural production. Preparing and conserving all products of the farm in the most perfect manner possible until they reach the consumer, and for which the highest practical prices are paid the producer. The transportation of farm products as cheaply and directly to the consumer as possible was another item.

"There must be a larger rural working population," he stated, "which means for them some method whereby their labor will

be constantly engaged profitably. It means more varied and intensive farming, such as that supplied by the gardening, greenhouse working, and the feeding of cattle and poultry in the winter. All this means doubling the crops by increasing soil fertility.

INSPECTING IMMIGRANTS.

The effects of immigration on the national health was treated in a paper by W. W. Lee, secretary to the immigration department of the Quebec Young Men's Christian Association.

The only way to guarantee that the inspection of immigrants at the ports would be adequate was to take it out of politics and place it upon a civil service basis. The efforts of Canadians should be increased and the existing organization should be developed to the point where newcomers could be absorbed and assimilated without injury to the progress of native Canadians or older immigrant workers. "When this is done," said Mr. Lee, "the immigration problem will cease to exist."

Dr. C. A. Hodgetts said that the selection of immigrants by Canadian inspectors in Europe would go far to solve the immigration problem. He emphasized the opinion that Canada should not accept a greater number of immigrants than it could house.

That the best general state of health and the highest physical development of the body were not protections against infectious diseases was the opinion of Dr. W. H. Hill, director of the provincial laboratory at London, Ont. "If we would have 'sound minds in sound bodies', a people highly bred, well cared for, hygienically housed, clothed and fed," he said, "we must get rid of infectious diseases, for it is just such people that are susceptible to infection." The statement caused a discussion in which there was some difference of opinion between physicians.

Dr. G. G. Nasmith made an excellent case in favor of the maintenance of municipal laboratories. He also corrected the statement that Dr. Bryce, chief medical officer of the Interior Department, had advocated the use of Toronto Bay as a sedimentation basin and decried the use of chlorine. There was a debate, in which the establishment of open-air schools was approved. A. J. Green, of London, England, explained the work of the open-air school in which he is interested; Miss L. Rogers told of a school in Toronto; Dr. Holbrook spoke of one in Hamilton, and Dr. Struthers intimated that Toronto might one

day see roof garden schools like the one conducted now in Chicago. Dr. J. F. Goodchild dealt at length with the necessity for fresh air in the home as well as in the school.

THE BANQUET.

That national welfare is not possible without a healthy, robust people, and that Canada's greatest problem is the care of her children, were messages contained in a number of brilliant addresses delivered at the second annual dinner of the Canadian Public Health Association. There were seated at the head table men representative of the Federal Government, the Provincial Government, the government of Toronto, the University of Toronto, and of the Church. Dr. C. J. Hastings, the Medical Officer of Health of Toronto, presided, and those seated at the head table were: President Hodgetts of the Canadian Public Health Association; Archdeacon Cody, Dr. J. A. Macdonald, President Falconer of the University of Toronto, Hon. W. J. Hanna, Mr. Justice Riddell, Dean Clarke of the Medical Faculty of the University of Toronto, Controller McCarthy, and Aldermen Maguire, Ryding, Saunderson, May and Graham, and Mr. G. A. Dickinson.

Dr. Paget, who has charge of the medical inspection of immigrants at the city of Quebec, was on the programme to propose the toast of Canada, but he was greeted with loud applause when he proposed the toast of "United Canada."

Dr. J. A. Macdonald, editor of *The Globe,* said that there was no subject of more importance to Canada than that of public health. Canadians were engaged in the great work of building up a new nation, which nation depended greatly for its welfare on the physical, intellectual and moral health of its people. The members of the Canadian Public Health Association, he said, were greatly responsible for the new nation. It was of supreme importance what kind of men and women were bred in Canada. The great concern for Canadians was that if they, as a new nation, failed to heed the lessons of Europe's mistakes, the condemnation was heavier upon them because they knew better.

Archdeacon Cody made an eloquent plea for the child. He enumerated its essential rights as the right to be well born, to decent living, to a decent home, to protection, to play, and to a sound education. When the health of the child was obtained by any community, he said, the future of its citizenship was assured. The problem of dealing with the child was funda-

mental and at the basis of all social progress. Neglect of children was not only criminal, but suicidal on the part of any community.

"We have been hearing for a hundred years of the rights of men," he said. "Now we are beginning to hear of the rights of women, and we ought to hear more of the rights of children. Some of them are the right to be well-born, the right to play, and the right to a sound education." Every child had the right to be born sound physically, mentally and morally. In order that this might be, parents must be well housed, have good air, good water, and a certain amount of leisure. It was the bounden duty of the church and the State to see immediately what could be done to prevent defectives from propagating their species. Speaking of the child's right to live, Archdeacon Cody said, that one of the tragedies of modern civilization was the absent mother forced by necessity to go out to work.

He attacked vigorously the apartment house, which had a downward tendency toward the crowded tenement district. He applauded the action of the City Council in seeing that apartment houses gave enough land and air. Nothing that would save children was too costly. In this respect the speaker said that the money which was spent in the reformation of children would be spent much more effectively in their formation. He was glad to see the growing tendency to give the children open space to play in. The battle against dwarfing, drunkenness, sensuality and ignorance was won when the child was taught how to play properly. In regard to the child's right to a sound education, he said that we dared not, if we were going to protect the race, neglect the moral and spiritual part of education. There was no sanction for enforcing morality but religion. The Archdeacon said that the great evil of modern civilization was the city, and urged the public advocacy of keeping the people on the land, where they seemed to breathe freer and purer air. All social evils came to a head in the city.

Hon. W. J. Hanna, the Provincial Secretary, said that if there was anything worth while in this Province it was the Health Act of the last session, and almost every other speaker referred in terms of the highest praise to this Act. Dr. C. K. Clarke, Dean of the Faculty of Medicine, said that an American Health Commission, which had been all over Europe and the United States, said that in Ontario it had found better con-

ditions than in any other place where its investigations had been carried on.

Dr. Chas. Hodgetts, said that Mr. Hanna was the autocrat of health in this Province, and that public health was better in the hands of one man well-advised until democracy showed more intelligence.

Dr. Falconer asserted that if the health officers were pressing forward, it was because they were being pressed from behind by the unseen, unknown men working in the laboratory. Those men were twenty-five years ahead in their theories of those being given to the public. Mr. Justice Riddell expressed his gratification that the objects of the association were in behalf of the poor, the value of whom to the nation was just being realized.

There is a little bit of history connected with the banquet. There was for a time a division in the ranks of the local workers. Some favored a "men's" banquet, others a "mixed" banquet. Finally a meeting was called to consider details. At that meeting Mrs. Heustis, the chairman of the local Ladies' Committee, said the ladies should go. Mrs. Anderson agreed. There was no dissenting voice. The "mixed" dinner was decided on. It happened, however, that the "mixed" dinner in Montreal last December was the only feature that was not considered a decided success. The attendance was small, and the function on the whole rather uninteresting. Would the members and their women folk attend this year? Well! the banquet came; and the women and men came, and the results were so satisfactory that it is doubtful if, for many long years to come, any man, woman or child in any way interested in matters pertaining to public health will ever again object to a "mixed" dinner.

The banquet was a huge success; the "best ever," every one says. The various tables in the spacious McConkey banquet hall were surrounded by parties composed of men and women, looking at all times very happy. The only group of men who looked lonesome for a time were those who sat "all alone by themselves" at the head table. However, even these poor men looked very happy after the "toast master" commenced work. The speeches were bright, sparkling, witty, able, and sometimes brilliant. Upon the whole these were probably the best ever heard at a medical banquet in Toronto.

The closing session of the Association's Annual Gathering was also marked by the election of officers. Dr. J. W. S. McCullough, Secretary of the Provincial Board of Health, succeeds Dr. C. A. Hodgetts as President of the organization.

Other new officers are:—Hon. Patron, H.R.H. the Duke of Connaught; Vice-Patrons, Lord Strathcona and Right Hon. R. L. Borden; Hon. President, the Premier of Saskatchewan; Hon. Vice-Presidents, Hon. Clifford Sifton, Hon. F. D. Monk, Hon. Sam. Hughes, Hon. Martin Burrell, Hon. J. D. Hazen, Sir James P. Whitney, Hon. Walter Scott, Hon. C. W. Murray, Sir Richard McBride, Sir Rodman Roblin, Hon. H. K. Flemming, Sir Lomer Gouin, Hon. A. L. Sifton, Sir William Van Horne; Vice-Presidents, Dr. A. J. Douglas, Winnipeg; Dr. C. J. O. Hastings, Dr. Helen MacMurchy, Dr. J. D. Page, Dr. T. J. Whitelaw, T. Aird Murray; Secretary, Major Lorne Drum; Treasurer, Dr. George D. Porter, Toronto. The Executive Committee consists of the President, the Secretary, the Treasurer, Prof. John Amyot, Col. G. C. Jones, Ottawa, and Dr. C. A. Hodgetts.

Place of meeting next year, Regina.

At the business meeting resolutions were adopted thanking Col. and Mrs. Gooderham, a number of city clubs, the ladies of the local Reception Committee, and Sir Edmund Osler for their hospitality to the visitors, and to the University of Toronto for the use of the Physics Building for the meetings of the Association, and the retiring officers for their services during the past year.

Two important resolutions were passed. In the first place the organization urged the formation of a Federal Department of Public Health. In the second place a resolution was passed to the effect that a committee be appointed to draw up a memorial to be presented to the Dominion Parliament that it is against the interests of public health that raw sewage be permitted to discharge into waters which are used as the sources of water supply; that it is the conclusion of the Public Health Association that an Act regulating the pollution of streams is required in order to strengthen the hands of Provincial authorities; that the committee have power to draw up the said memorial and present to Parliament all available evidence and data bearing upon the prevention of the pollution of waters which are or may be used as sources of water supply. The committee appointed to deal with the subject comprised Dr. C. A. Hodgetts, Medical Adviser to the Commission of Conservation; Dr. J. W. S. McCullough, Secretary of the Ontario Board of Health; Major Lorne Drum; Dr. C. J. O. Hastings, Medical Health Officer of Toronto; Dr. M. M. Seymour, of Regina; Dr. J. A. Amyot; Dr. G. G. Nasmith and T. Aird Murray.

Miscellaneous

In all conditions of weakened digestive powers, from any cause, Grape-Nuts, for many well understood reasons, is an ideal aliment. It requires thorough mastication, to begin with, and this starts the digestive juices flowing. Being made of whole wheat and malted barley, it is so easily digested as to require very little energy on the part of the weakened digestive organs. It is, therefore, available for nourishment when most other foods are too heavy or require too long a time for absorption. Grape-Nuts is usually absorbed in about one hour.

The agreeable, neutral flavor of Grape-Nuts admits of this food being readily combined in the way of puddings, dressings, and so on, with other desired articles of food.

Physicians' Approval to Precede Marriage

Dean Walter T. Sumner, of the Cathedral of S.S. Peter and Paul, Chicago, recently delivered a sermon upon the "Sacrament of Marriage," in which he takes advanced ground in regard to marital relations. He also issued the following edict: "Beginning with Easter, no persons will be married at the cathedral unless they present a certificate of health from a reputable physician, to the effect that they are normal, physically and mentally, and have neither an incurable nor communicable disease." "This step is taken only after months of study of the situation and deliberation as to its advisability. It is believed that this stand will meet with the immediate sympathy of the clergy in the churches at large, all of whom have long felt the undesirability of being party to the marriage of persons who, because of their physical condition, should never be allowed to enter into the marriage state and propagate their species."

The Pneumonia Convalescent

In spite of all the modern advances in scientific therapy, and the improvements in the general handling and management of acute infectious disease, Acute Lobar Pneumonia still deserves

the title ascribed to it by Osler: "The Captain of the Men of Death." There are, however, especially during the fall and winter months, many cases of the lobular or irregular pneumonia that so often complicates or follows la grippe. When this condition supervenes it is more than likely to follow a subacute or chronic course and convalescence is frequently long delayed. Under such circumstances, in conjunction with treatment designed to hasten resolution, a general blood tonic and vitalizing agent helps materially to shorten the convalescent period. Pepto-Mangan (Gude) is of much value in this field, because it not only increases the solid elements of the blood, but also acts as a true tono-stimulant to the organism generally. As Pepto-Mangan is free from irritant properties and constipating action, it is especially serviceable in the reconstructive treatment of the devitalization following the pneumonia of the aged.

The Fallacies of Drug Nihilism

Meltzer, in a scholarly address, replete with statements concerning the underlying principles of medical practice that will appeal to cultured physicians, calls attention to the fact that in medicine there is human life and happiness at stake, and one ought to recognize the undeniable fact that some claims may be true, even if our methods have not yet been able to prove them. The history of the use of iron in the treatment of chlorosis ought to be a lesson. While every physician could tell from his own knowledge that, say, Blaud's pills act in these cases like a charm, great laboratory men like Bunge and Schmiedeberg denied persistently that inorganic iron can be absorbed and thus capable of supplying the iron deficiency of the anæmic patient. The struggle lasted nearly a quarter of a century. The trouble with the men trained exclusively in laboratories is twofold. First, they do not seem to see that a medical fact, observed critically by a capable physician, deserves as much credence and consideration as a fact developed by laboratory methods, and, second, that the laboratory man offers here positive opinions in a field in which he has had no experience.

Great physicians, like Traube and Kussmaul, who were busy general practitioners before they entered on their brilliant scientific clinical careers, and whose training has been more in the experimental laboratory than in the dead-house, were never infected with therapeutic nihilism, though they dwelt then in the midst of this mental epidemic.—*American Medicine.*

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IS OF GREAT VALUE.

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The Therapy of Cold

According to Blackader, the effect of cold air on the body is two-fold. First, there is an actual extraction of heat which is rarely desirable, and as far as possible should be prevented. The body loses the largest amount of heat through conduction, and this should be prevented by proper clothing. Much more important than the abstraction of heat from the body is the stimulating action of the cold on the delicate sentient nerves of the periphery. Both respiration and circulation are strengthened, oxidation is increased, and nutrition becomes more active. There is also a powerful stimulation conveyed to the medullary centres by the effect of cold air on the nasal mucous membrane. Cold, provided it be not excessive, has a markedly stimulating action on the digestive system. Cold also seems to stimulate the blood-forming organs. As a result of these factors, the resisting powers of the body against toxins and its ability to respond protectively to the assault of infection is greatly increased. These benefits of cold depend, however, on the power of the individual to react, and this varies greatly and seems to be dependent on the vasomotor tone. Those suffering from any interference with the free passage of air through the nostrils do not react well to cold air. Inflammatory conditions of the larynx and trachea may be subjected to additional irritation by cold air. To benefit from a winter in the north, the intestinal tract and the kidneys should be in good working order. Extreme cold is not desirable for those suffering from gout, arthritis or neuritis. For those suffering from advanced degeneration of any organ, for those advanced in years, and for the very young extreme cold may be distinctly harmful. It cannot be too strongly emphasized that all the benefit to be derived from a residence in the north will depend on the completeness with which an outdoor life is lived.—*American Medicine.*

Chronic Pericolitis and Chronic Appendicitis

Roll (J.). *Norsk. Mag. f. Laegevidenskaben,* Christiania. The author discusses chronic pericolitis, with details of ten illustrative cases operated upon, and shows how it may be caused by and confused with appendicitis of a chronic type. Pathologically, the patients show peritoneal thickenings and adhesions round the cæcum and ascending colon. These inflammatory changes are very variable in extent, and so the symptoms are correspond-

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The Silent Waverley Electric Four-passenger Brougham has the longest interior of any car of its type, 65 inches. It has two full-width seats, generously upholstered.

It is interesting to note that the makers of this car, the Waverley Company of Indianapolis, have had sixteen seasons of electric carriage building, and the 1912 car is the product of the accumulated experience of these years.

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ingly variable and sometimes indefinite. Thus they may be mainly near the cæcum and appendix, when chronic appendicitis will be diagnosed, though at operation a normal appendix may be found. If they are mainly in the upper part of the ascending colon and about the hepatocolic ligament, when they appear to be connected with enteroptosis rather than appendicular inflammation, the symptoms will be more indefinite, dyspepsia rather than appendicitis will be simulated, colic and constipation will be complained of, neurasthenia may be diagnosed—Roll quotes illustrative cases—and great improvement will result from rest in bed and careful feeding, with relapse as soon as the patient gets about again. In some instances the clinical picture is complicated by nephroptosis, with its characteristic symptoms superadded to those of pericolitis and colonic adhesions. He lays stress on the constipation produced by adhesions about the ascending colon; and recommends early laparotomy and severance of the adhesions before they have become too extensive (for they tend to spread) and before they have interfered too much with the structure and functional activity of the colon.—*The Medical Chronicle.*

On Sudden Death Through Fibrillation of the Ventricle

Hering (H. E.). *Münch. med. Wochen.* It has been conclusively shown that fibrillation of the auricle is a common condition, and is fully compatible, in many instances, with a moderately active life. Fibrillation of the ventricle, however, is a condition which is incompatible with life. It has been suggested that sudden death is due to this cause, and the writer discusses the subject at some length, more especially in relation to the status lymphaticus. Experimentally, ventricular fibrillation can be induced by causes similar in many respects to those which induce it in the auricle. Strong vagal stimulation, frequent ventricular extrasystoles, tachycardia, and auricular fibrillation, may all be followed by ventricular fibrillation and cessation of life. Similarly after narcosis, especially chloroform, intravenous injections of calcium, or coronary obliteration. All these causes, the writer discusses. He concludes that there is much to be said in favor of the view that ventricular fibrillation is the cause of sudden death; that this has been seen experimentally by the electrocardiographic methods; and that it is to be expected that a similar appearance would obtain in human records, should occasion ever arise.—*The Medical Chronicle.*

ERGOT, AND THE PRICE IN THE MARKET

In 1910 ERGOT was a short crop and prices were increased.

In 1911 the excessive drought reduced the ERGOT crop to one half and prices soared again.

This year the excessive rains washed a large part of the ERGOT crop away and now prices are higher than they have been in twenty years.

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Acapnia

Cotton (*Boston Medical and Surgical Journal*), defines Acapnia as the condition in which the carbon dioxide content of the body is definitely below the normal proportion, about forty per cent. by bulk. An increase in this percentage causes an exaggerated respiratory effort to get rid of the excess by way of the lungs, and no other clinical symptoms, so far as known, except headache, nausea, and malaise. The percentage is reduced by excessive respiration, induced by pain, or nervous excitement, or occurring in anæsthesia, as well as by exposure of the body tissues without protection of the skin during major operations. Such a reduction brings about: 1. Loss of the normal excitant influence of carbon dioxide on the respiratory centre, hence the occasional failure of respiration under anæsthesia; (2), loss of venous tone, hence the "bleeding into the splanchnic veins" which seems to be an important element in surgical shock; (3), loss of tone and action of other unstriped muscle fibre, particularly of the gut. He finds from his tests that hysterical hypernea may produce serious general acapnia, that local acapnia may cause loss of peristalsis, that general acapnia is readily remedied if treated promptly, and that local acapnia in laparotomies is easily handled. The relation between acapnia and shock needs further study.—*New York Medical Journal.*

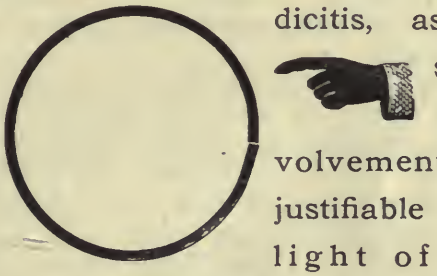
The Treatment of Mushroom Poisoning

Desfosses, in reply to inquiries from subscribers to *Presse médicale* concerning the proper treatment of poisoning from mushrooms, many cases of which are reported in France at this time of the year, writes in the issue of that journal for September 18th, first, that it is useless to give emetics in the case of late development of symptoms in from ten to thirty hours after ingestion of the fungi. By that time the mushrooms have been thoroughly digested and the products carried into the blood, so it is unwise to deplete the patient's strength by causing vomiting. Stimulants are the first thought, strong coffee, ether on sugar, hot bricks, and friction to the body. Second, Desfosses advises a purgative to empty the lower part of the digestive tract. Castor oil is the best agent, as it does not dissolve the toxic principle of the mushroom; if there is no oil at hand, sodium or magnesium sulphate may be used, or any strong mineral water. The third indication is to facilitate diuresis

"the value of cold as a therapeutic agent in inflammatory conditions is slowly but surely reversing from a fact into a very doubtful theory.

Dr. Cavana (*American Journal of Surgery*, Oct., 1912) demonstrates by careful analysis and logic that pathogenic micro-organisms multiply most rapidly in temperature from below 98.6° to freezing and "that in a temperature of 100° Fahrenheit most of the laboratory cultures die and that in a temperature of 103° all artificial germ propagation ceases."

Taking a case of Pneumonia, Tonsillitis, Bronchitis, even Appendicitis, as Dr. Fauntleroy suggests, in fact any inflammatory involvement, it would seem justifiable and logical in the light of this reasoning that heat, best applied in the form of antiphlogistine, facilitates a cure by favoring leucocytosis and adding to nature's defense against suppuration.



There can be no doubt that much of the success in treating inflammations, whether deep or superficial, with antiphlogistine which retains its thermic value for hours if applied thick and hot, has been due to this therapeutic function."

by the administration of large quantities of milk; tisanes of couchgrass or borage, familiar to every French family, are also advised for this purpose.

Fourth, the writer counsels meeting various untoward symptoms as they may arise. Vomiting would be met by ice, seltzer water, *potion de Rivière* (solution of potassium citrate), chloroform water with cocaine; a failing heart would be braced by injections of caffeine, camphorated oil, or sparteine sulphate. Enteritis, if acute, would indicate enemata of infusion of marshmallow, or hot water containing laudanum. Delirium would obviously require sedatives, and collapse stimulants. Perseverance is the watchword, as the prostration from this form of poisoning sometimes lasts for weeks.

Where, on the other hand, the symptoms are immediate and acute, care should be taken not to administer elixirs or cordials or anything likely to promote absorption or diffusion of the poison. Vomiting should be induced at once by tickling the throat with a feather or the finger; if this does not succeed, give a dose of soapsuds or large quantities of tepid milk. The stomach pump may be used. Hot applications and friction to the body are of high importance, as well as inhalations of ether or even vinegar.

Our readers can easily imagine substitutes for any of the remedies mentioned, which are peculiar to French practice. Desfosses concludes his article by instructions to search out, for scientific reasons, the nature of the mushroom suspected, by interrogation of the cook, of those who gathered it, etc. Microscopical examination of the matter vomited, of the dejecta, and of any remaining portions of the mushroom is also in order.

Acute Appendicitis

Finality seems as far away as ever in the vexed question of when to operate in acute appendicitis, notwithstanding the fact that three surgeons out of four seem to have laid down at some time or other hard-and-fast principles for the guidance of their colleagues. At the Liverpool meeting of the British Medical Association this evergreen topic was introduced by Mr. H. J. Paterson, who is one of those favoring immediate operation in all cases without exception. He produced a series of cases treated on these lines with a mortality of just over 3 per cent., and challenged those who taught differently to produce figures as good. This challenge was taken up by Sir G. Beatson, whose

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figures certainly showed a record no jot inferior to Mr. Paterson's. In the discussion most of those present sided with the latter, but Sir George had some support for his views upon the treatment of late cases with localized mischief. Considering that this question has been dividing surgical opinion now for fully a decade, it is remarkable that it is not yet settled; probably the truth is that each system has drawbacks which lead to occasional failures.—*The Hospital.*

Oedema due to Administration of Sodium Bicarbonate in Diabetes

Labbe, Bith and Fertyx (*Bulletins de la Soc. Méd. des Hopitaux*). The administration of large doses of sodium bicarbonate for the treatment of the acidosis of diabetes may produce considerable œdema. Widal has observed an increase of weight of 10 kilos. in 15 days. The writers have seen a diabetic, who was given 40 gm. of bicarbonate daily for a week, show an increase in weight 8 kilos. with œdema of the lower limbs. They find that the increase of weight in such cases is usually rapid and often amounts to 500 to 1,000 gm. daily. The increase depends on the dose. Under daily doses of 20 to 30 gm. it is slight or absent; under doses of 40 or 60 gm. it is usually considerable. Patients do not all react in the same way: some are very sensitive to the drug; in others it seems impossible to produce œdema. One patient took as much as 50 gm. daily without increasing in weight. On stopping the bicarbonate the œdema rapidly disappears.

The mechanism of this œdema is disputed. Widal and others, having observed in several cases concomitant retention of sodium chloride, think that the bicarbonate has an inhibitory effect on excretion of the chloride, the retention of which caused the œdema. However, in 3 cases in which the writers gave 40 or 50 gm. of bicarbonate of sodium daily, analysis of the urine showed no retention of sodium chloride. It seems, therefore, that the retention of the bicarbonate in the body may produce œdema like that due to retention of the chloride. Other salts have a similar action. Widal has recently shown that large doses of magnesium sulphate may produce œdema.

Bicarbonate of sodium œdema may be produced in other diseases than diabetes. A patient suffering from Bright's disease with anasarca was treated by eliminating chlorides from the diet

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and the œdema disappeared. As soon as his weight attained equilibrium from 20 to 40 gm. of sodium bicarbonate were given daily. After 13 days he had gained in weight 3.4 kilos. and the legs were œdematous. On discontinuing the bicarbonate his weight fell 3 kilos. in 2 days. During this time there was no retention of chlorides. Yet, in consequence of the renal disease, he was predisposed to such retention. On administering chloride his weight rapidly increased and œdema of the limbs and face appeared. In 5 days he was given 81 gm. of sodium chloride and excreted only 24. Pfeiffer has observed that the administration of sodium bicarbonate in patients other than diabetics, and even in health, causes an increase of weight of several kilos. Hayem found in dyspeptics an increase of weight from administration of the bicarbonate. However, in consequence of the chemical constitution of the body fluids and of alimentary customs, sodium chloride is the chief regulator of osmotic exchanges and the usual factor in œdema.—*The Medical Review.*

Thyroid Extract in Trigeminal Neuralgia

Herbert French, M.D., F.R.C.P. (*Med. Press*). The generalized sensations, such as acroparæsthesia, which are apt to occur in stout women in middle life, who without being typically myxœdematous are nevertheless benefited by thyroid extract, are well known. It does not appear to have been suggested that some more definitely local symptoms such as trigeminal neuralgia may also be dependent on "hypothyroidism." The writer has obtained good results in some cases of this intractable malady.

A married woman, aged 55, in good circumstances, became very stout, though she was not a great eater. She was mentally keen and active. Twinges began in the left infra-orbital nerve and rapidly developed into typical and severe neuralgia of every branch of the second division of the fifth nerve. The attacks were somewhat periodic, and for 6 weeks or 2 months she might be quite free. Then a few warning twinges would develop, and within a day or two she would be in the grip of an attack lasting 3 weeks or more. Food was then taken with difficulty and sleep was prevented. The teeth were all artificial and there were no stumps. No ocular, nasal or other cause could be discovered.

After suffering for 4 years, one grain of thyroid extract was given thrice daily, and the dose was gradually increased to 3 grains. After beginning the treatment only few mild twinges

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occurred, and then pain ceased. After a year the dose was reduced to 1½ gr. thrice daily. More than 3 years have passed without relapse, and the general condition is excellent.

The writer does not suggest that thyroid treatment is useful in trigeminal neuralgia in general, but only in cases due to hypothyroidism. It is well worth trying when other remedies have failed. Dosage is important and is very variable. Some patients who have hypothyroidism do well on small fractions of a grain, badly on grain doses Others do better on such doses as were given above. It is better to begin with small doses, such as one-sixth of a grain twice daily, and gradually increase the dose.—*The Medical Review.*

Optic Neuritis after Salvarsan

The claim made on behalf of salvarsan that it is free from the danger of optic neuritis appears to be subverted by a case reported by Gaucher (*Presse médicale,* May 15th, 1912). A man, aged 27, with syphilis of one year's duration, received two intravenous injections of salvarsan—0.6 gram—in May, 1911, followed by several intramuscular injections during June and July. In August he suffered from vertigo, tinnitus, and difficulty in speech. In September double papillitis was found. In October another intravenous injection of 0.1 gram of salvarsan was given to cure the so-called "neuro-recurrence." This was immediately followed by delirium, tachycardia and anuria. Injections of calomel were then given with no result. In March, 1912, there was double neuro-retinitis, with complete blindness. The Wassermann reaction was negative. Gaucher has also observed several cases of unilateral deafness and tinnitus after salvarsan, which persisted in spite of treatment. He attributes all such cases of alleged "neuro-recurrence" to the effect of arsenical poisoning. He remarks that salvarsan has caused more deaths than would have occurred if the cases had been left without treatment.—*British Medical Journal.*

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Original Communications

THE USES OF WHITE PRECIPITATE IN DISEASES OF THE SKIN

By Douglass W. Montgomery, M.D., San Francisco, Cal.

White precipitate or ammoniated mercury is one of the most valuable external remedies in the treatment of diseases of the skin, not alone because of its intrinsic effectiveness, but also because of its lack of objectionable features. It is an odorless, pure white, smooth, almost impalpable powder, and it mixes admirably with many other medicaments and with any of the ointment bases.

White precipitate is stimulating, and this stimulating property is often valuable, as it causes a reaction accompanied by increased blood supply, enabling the tissues to throw off disease. This stimulating quality varies with the patient's susceptibility. Years ago I prescribed a three per cent. white precipitate ointment for psoriasis, and excited a severe dermatitis. When the reaction subsided the psoriasis had disappeared and has not returned in twenty years. Kyrle has recently reported a case where there was a marked sensitiveness to mercury, and where white precipitate, prescribed for seborrhœa of the scalp, caused a severe dermatitis of the scalp and face (1) and Theodor Veiel mentions that he has repeatedly produced severe irritation by using salicylic acid and white precipitate salve on the scalp of white haired patients, on whom he could not, because of staining, use tar, chrysarobin or pyrogallol preparations. (2) These instances of extreme sensitiveness are rare, but what may be called a normal sensitiveness is common, and, as before indicated, some of the most

valuable effects of the drug are dependent upon it. It is because of this sensitiveness of the skin to this drug that the pharmacopoeial ten per cent. white precipitate ointment is in some instances too strong, and it is frequently best modified by mixing it with oxide of zinc ointment. Usually, for instance, the prescription for impetigo contagiosa is written:

℞ Unguenti hydrargyri ammoniati .....ʒss
Unguenti zinci oxidi.....ʒi
M

The Severe Critic on seeing me write a prescription as above, asked censoriously why I employed oxide of zinc, and why I did not just write the percentages of the ingredients with an appropriate ointment base. He furthermore sagely remarked that what was wished was an antiseptic, and that oxide of zinc was not an antiseptic. I hastened to explain that white precipitate is an admirable antiseptic, and especially so toward the streptococcic cause of impetigo contagiosa, but that it is also stimulating for the skin, and that this stimulation is particularly objectionable in a disease like impetigo contagiosa, where the skin is already over-stimulated. In order to modify the stimulating quality of the officinal ten per cent. white precipitate ointment it is therefore diluted to three and one-third per cent., and in order still further to modify it, a bland soothing powder, such as oxide of zinc, is associated with it. As for using the already prepared oxide of zinc and white precipitate ointments in combination, instead of a percentage of each of the ingredients together with an ointment base, that also has its advantage. This special advantage lies in the fact that as these ointments are already mixed, mixing them together additionally triturates them, and renders the resultant ointment all the more bland and smooth. In an ointment so prepared the antiseptic quality is retained in a sufficiently great degree, while its irritating effect through dilution, through combination with oxide of zinc, and through thorough trituration is modified so as to be perfectly harmless to the average skin.

It is interesting to know that this application of a mixture of white precipitate and oxide of zinc ointments in these proportions was used for impetigo contagiosa by clinicians long before it was proven that this disease was due to streptococcic infection, and indeed long before it was very precisely known or appreciated that it was a microbic disease.

It may be further remarked that the Severe Critic is often an intolerable bore. He is frequently that omniscient sort of genius who has his oar in every man's boat and sips the honey from every flower, and in his acquisition of knowledge neglects acquiring the dexterous application of it.

This combination of white precipitate and oxide of zinc salves together with boracic acid lotion forms one of the very best treatments for streptococcic paronychia, commonly called "run round" of the nail. This paronychia may appear as the sole manifestation of the disease, or it may occur secondarily to impetigo contagiosa of the face. A compress of two or three thicknesses of gauze, saturated in a four per cent. watery solution of boracic acid, is applied around the finger, and covered with oil silk, held in place with a bandage. The moisture of the dressing and the heat of the finger cause this dressing to act like a poultice, softening the pustules and crusts and permitting the ointment which is now applied to penetrate as far as is required.

White precipitate ointment diluted and used in the same manner in conjunction with boracic acid solution forms one of the best treatments for those other two severe streptococcic infections, pemphigus neonatorum and ecthyma. When the inflammatory reaction in either of these two diseases, or in any of the streptococcic infections, is very severe the boracic acid solution may be advantageously combined with liquor alumini acetici in this way:

℞ Liquoris alumini acetici 30.00
Acid boracici solutio saturat 300.00
M.
Sig.
Saturate compresses, apply, and cover with oil silk to retain the moisture.

It must never be forgotten that one of the chief characteristics of the superficial streptococcic infections is the formation of crusts, under which the micro-organisms live in safety. Lotions of whatever constituents, may fail to soften and remove these crusts, and the antiseptic ointment, not reaching the micro-organisms, fails for that reason alone to cure the disease. Forceful removal of the crusts is not good practice, as thereby the skin is injured and the infection is spread. It is just here where the boracic acid starch poultices as employed by Jamieson, do so much good. A fairly thick paste is made by pouring hot water on powdered starch. A heaping tea-

spoonful or more of boracic acid powder is added to about four ounces of such a paste. Apply as poultices, and renew about every half hour.

There is no ammoniated mercury in the French Codex (3), and therefore it is rarely mentioned by French authors. The "white precipitate" of the French is often really calomel, not ammoniated mercury. In a disease such as impetigo contagiosa, that is usually so easy to treat, the non-employment of ammoniated mercury does not much matter, as one can usually get along nicely with boracic acid ointment, calomel or yellow oxide of mercury, all of which are cleverly and effectively used by French physicians. Occasionally, however, streptococcic infection is either very severe or very enduring, and the very best means are then necessary to combat it, and it is our opinion that ammoniated mercury, under such circumstances, constitutes one of the very best medicaments we have. Besides being a cutaneous stimulant and an antiseptic, white precipitate acts specifically on the skin in a way analogous to the red and yellow oxides and the mild chloride. The manner of this specific action has never been satisfactorily explained. It is known that this specific action is soothing, beneficent and antipruritic, as shown by the universal employment by oculists of the red and yellow oxides, and of calomel in blepharitis and in irritative troubles of the lids and conjunctivæ, and also by their hardly less extensive employment by dermatologists for seborrhœic eczema, psoriasis, and other catarrhal cutaneous inflammations, and for pruritus. White precipitate differs from calomel and the red and yellow oxides by being more stimulating and by being more actively antiseptic when applied on the skin.

It is probably this specifically soothing action together with its antiseptic power that renders white precipitate ointment such a valuable remedy in some cases of acne. Acne is by no means a simple disease or a simple infection. Erethism of the skin plays a distinct role in many cases. After the pyogenic infection has been controlled, there is left, in these cases, a flushing of the skin in which pyogenesis arises at the first opportunity. Either lotions containing bichloride of mercury, or an ointment made of equal parts of white precipitate ointment and oxide of zinc ointment, or of the full ten per cent. white precipitate ointment may do better than anything else in such cases.

In psoriasis and in chronic indurated patches of eczema white precipitate ointment is an excellent remedy, and is often advantageously associated with tar, especially coal tar. For years I have used the following prescription that I first learned from Louis A. Duhring:

℞ Liq. carbonis detergentis.....℥1
Hydrargyri ammoniati pulvis.....gr. XX
Lanolini.....
Vaselini..... āā ℥ss
M.
Sig.
Use once a day well rubbed in.

Jadassohn recommends much the same prescription for psoriasis of the face and hands, as:

℞ Liq. carbon. detergentis.....2.00-20.00
Hydrarg. præcip. alb.....5.00-10.00
Ad pis lanæ..... 50.00
Ol. oliv..... 20.00
Aq. .....ad. 100.00
M.

The beneficent action of white precipitate when used on the face and hands leads naturally to the subject of regional susceptibilities and limitations in the treatment of diseases of the skin. For instance, chrysarobin, which is such a fine topical application in psoriasis generally, is notoriously treacherous when used on the scalp or face, because of its liability to cause a severe chrysarobin dermatitis. Furthermore chrysarobin stains the hair a purple color, and is therefore inapplicable as previously indicated in light or white haired people. Chrysarobin also stains the nails a deep brown, and is, therefore, very disagreeable to those particular about their appearance. It is just in these situations that white precipitate, which is colorless, odorless, and does not stain, acts as an effective surrogate for chrysarobin.

White precipitate may also be used as an insecticide in pediculosis capitis. A curious and not uncommon combination of diseases may be mentioned here. The favorite situation of the pediculi in pediculosis capitis is from the nape of the neck up into the hair of the back of the head. In children this is apt to be combined with staphylococcic infection, so that the patients get an impetiginous eczema of the back of the head extending down on the neck, and an impetigo of the face. White precipitate ointment diluted about one half with vaseline meets the indications for the control of both infections. It

must always be remembered, however, that petroleum mixed either with vaseline or with balsam Peru is the best insecticide for pediculi of the head.

White precipitate combined with bichloride of mercury is used for lentigo or freckles. Of these two drugs I consider the bichloride of mercury the most effective in these cases, and from neither can much be expected.

To resume: We find that white precipitate is stimulating and occupies a place, in this respect, between the bichloride of mercury, which is corrosive, and the monochloride or calomel, which is soothing. It is more antiseptic on the skin than the bichloride. Bichloride of mercury is a poor antiseptic for the skin, because it irritates it and lowers its resistance, and furthermore because it so readily joins with the albuminous exudates and constituents of the skin, forming inert albuminates. White precipitate on the skin probably acts analogously to calomel powder in the eye. It is now held that calomel powder, when dusted in the eye and coming in contact with the sodium chloride of the tears forms minute quantities of bichloride of mercury that are sufficiently toxic for bacteria and yet not in large enough quantities to be detrimental to the conjunctiva. In the same or in a similar manner the ammonio chloride of mercury may form minute quantities of the bichloride—not enough to over-irritate the skin, but sufficient to kill the bacteria. It is this very point of doing enough harm so as to make life conditions uncomfortable for parasites, and yet not enough harm to interfere with the tissues of the host that is the chief aim in many of our therapeutic measures.

References.

(1) Zur Frage der Arzneiueberempfindlichkeit von Dr. Josef Kyrle, Archiv f. Dermat. u. Syph. Mai 1912, S. 548.

(2) Zur Therapie des tylotischen ragadiformen Ekzems der Handteller und Fussohlen, Arch. f. Derm. u. Syph. Mai, 1912, S. 1181.

(3) The National Standard Dispensatory, p. 788.

MALIGNANT DISEASES OF THE UPPER AIR PASSAGES, WITH NOTES UPON TWO CASES OF EPITHELIOMA *

By J. Price-Brown, M.D., Toronto.

I present the subjects of this paper with diffidence, for already on three different occasions I have expressed my views and related my experience in the treatment of malignant diseases of the nose and throat to this association. I was beginning to think it was too old and trite a story to be inflicted upon you again. Still I had nothing else to write about, and when our President, in the goodness of his heart, intimated to me that an article upon any subject would be welcome, I concluded to try your patience once more.

I was encouraged, too, in choosing this subject by the strong advocacy of Voltolini's views, so forcibly presented and supported by Bryson Delavan last year in his paper upon naso-pharyngeal fibroma. And particularly so, when such men as Bosworth and Lincoln, Ruprecht and Tomassi, Woods and Doyen all give expression to the view that these growths should be removed by internal, not external, operations—electrical methods of one kind or other always having the preference when at all possible.

My argument is, judging from personal experience only, that the treatment so advocated for fibroma is equally applicable to sarcoma, and to a limited extent to epithelioma also, and that of all methods electrical treatment is the best. It may be by electrolysis, the cautery-snare or the electro-cautery knife, one or two or all three combined, but however arranged, in the hands of a skilled, careful and persistent operator, the success which will attend his efforts by these means will far exceed the beneficial results which he can obtain by any other method up to the present time evolved.

If you can do away with the preliminary external operation in naso-pharyngeal fibroma you can just as effectually do away with a similar operation in naso-pharyngeal sarcoma. They grow alike, have a like origin in the soft tissues of the vault; and the injury to bony structures is more frequently that of pres-

* Read at the annual meeting of the American Laryngological Association at Atlantic City, May 30, 1912.

sure absorption than of malignancy within the bone itself. These remarks do not refer to malignancy within the antrum, which, of course, is an involvement of the bony walls and only amenable when practical at all to external operative treatment.

For twenty years I have advocated these views, and in the ten cases that I shall refer to each one has been treated solely by internal methods. Of course, I do not claim originality in the plan of operation, but I do claim to be the first to have carried out this method of treatment for such a prolonged period in so many cases and with such gratifying results.

Twenty-five years ago Bosworth and Lincoln both strongly advocated the use of the electro-cautery ecraseur in both fibroma and sarcoma of the naso-pharynx. Fourteen collated cases of fibroma are given in which eleven were cured and three recurred.

Of sarcoma of the nose treated in the same way the following are reported:

Rabetsch 1. Removed with galvano-cautery snare. No subsequent report.

Lincoln 1. In which two operations had been previously done, followed each time by recurrence. Lincoln then resorted to the electro-cautery loop and subsequently the electro-cautery knife, with complete success.

Schmiegelow 1. Removed by electro-cautery snare. No return in seven months.

Major 1. Galvano-cautery. No return in four months.

Bosworth 1. Galvano-cautery knife. No return in a year. Also one removed digitally and by curette. No return in six months.

In naso-pharynx—

Lincoln 1. Removed by galvano-cautery snare. No subsequent report.

Massei 1. Galvano-cautery snare. No subsequent report.

Bosworth 1. Cured by oft-repeated use of the galvano-cautery knife and forceps piecemeal. No return in seven years.

My first case, one of nasal sarcoma, came to me twenty years ago, when Bosworth's elaborate treatise was new in my hands. I need not dwell upon it now, as I reported it to this association in my first paper upon the subject, except to say that the growth was very large, was located in the right nasal passage, that the treatment consisted in the alternate use of electrolysis and the galvano-cautery, that it took more than six months to remove it. There has been no return, and the man is still in the enjoyment of excellent health.

Ten years elapsed. Then cases two and three came almost together. During that period the trend toward radical operation had developed. Fortunately my experience in case one had given me faith, and I tried it again; chiefly the galvano-cautery part. Case two recovered as the result of three months' treatment.

Case three required electro-cauterization upon the site of the original growth, to be repeated at intervals for six years, before the tendency to return was conquered. But it is now four years since he last received treatment. And both of these men are well to-day.

Five years later case four was placed under my care. The growth was removed in similar fashion. The freedom of the nasal passage was restored, and there was no perceptible recurrence, but the patient died two months later from septicæmia, induced partially by chronic suppuration of the antrum.

Next came cases five, six and seven, reported at our meeting in Boston three years ago. Case five was cured in a very few weeks by successive electro-cauterizations. The only deformity left was an internal one—the destruction of a large portion of the septum, to which the growth was attached. The external nose is normal, and the man is in the enjoyment of excellent health.

In case six vegetations at the site of origin of the tumor continued to recur, but these were very thoroughly burned away by electro-cautery each time that they appeared. I presume now that the vitality of the neoplasm has been conquered, for there has been no return whatever during the last nine months.

Case seven was the one in which the common carotid was tied one year after commencing treatment, on account of excessive hæmorrhage. This is two years ago now. Although the tying of the artery saved the man's life at the time, it did not put an end to the redevelopment of the sarcoma, for it still persisted in showing itself at the junction of the posterior choanæ with the vault of the pharynx, calling for renewal of the cauterizations. The last, however, was done three and a half months ago, and at the present time there is no sign of redevelopment. Both these young men are now the pictures of robust health, as their appearance in the last issue of the *Transactions* indicated a year ago. All these cases presented the usual classical signs. All but one had been operated upon by other surgeons before coming to me. All, without exception, were pronounced cases of sarcoma by competent pathologists after careful microscopical examination, thus verifying the clinical diagnosis.

I now come to case eight, sarcoma of the larynx, which I reported to the association last year. To be brief, two weeks after our meeting in Philadelphia in June, 1911, the man was well enough to return to his regular occupation as lithographer, and to continue at it for the ensuing five months. During all this period, however, I required to repeat the destructive operations once or twice a week. If a longer interval was allowed to elapse the vegetations would increase so rapidly within and without the left side of the larynx that respiration would be seriously impaired. Still, during all this time, he enjoyed fairly good health, and a normal appetite and easy deglutition.

On January 2nd last he had a deeper cauterization than usual in the region of the left ventricular band, above the vocal cords, and also external to the left aryepiglottic fold. On the following day, while at work he had a severe chill, compelling him to leave the shop and return home. The temperature, which had all along been about normal, ran up quickly to 104.5. He became very ill. Impending suffocation followed. The breath became foul and the neck on the affected side became tender, red, brawny and swollen up level with the jaw. It looked like a severe case of localized erysipelas, with rapid extension of the disease. I considered the case at last to be hopeless, and expected a speedy euthanasia.

But a change came. In a couple of days the fever abated. The swelling commenced to go down and the patient spat off successive pieces of putrid tissue. Deglutition and respiration improved, and two weeks later the patient returned to my office in good spirits.

On examination I found that large masses of sarcomatous tissue had sloughed away. The affected surfaces looked clean and healthy and but little of the tumor was visible. The neck was much smaller and the glands had shrunk. I kept the case under observation, and for another two weeks there was no reaccession of growth. It looked as though the erysipelatous inflammation—bacillus prodigiosus like—had made a finishing case of the disease.

But it was not so. For five weeks there were no burnings. Then the life buds of the degenerate appeared again. Once more the gland commenced to enlarge. And from then until now burnings have been resumed.

Three weeks ago, as a last resort, I concluded to try the effect of radium once more. This time as an adjunct to the cautery treatment. The patient has had during this period

twenty milligrams of bromide of radium strapped on his neck over the enlarged gland for a period in all of seventy-two hours, at the rate of about five hours a day. During the same time he has had one cauterization of the laryngeal growth per week.

I can only say that the conditions are not encouraging. There can only be one opinion on the probable result. Physically the man continues hopeful.

The new cases, nine and ten, are both epitheliomata.

Case nine, M. F., plasterer, age 72, was referred to me at the Western Hospital on November 16th, 1911, complaining of a large growth in the left side of the throat, which produced difficulty in swallowing and was attended by pains shooting up into the ear.

On examination I found an ulcerated tumor occupying the place of the left faucial tonsil, including both anterior and posterior pillars, and attached to the side of the tongue and part of the posterior wall of the pharynx as far down as the back of the thyroid. The growth appeared first about a year ago, but during the last few months it had grown rapidly. As the external glands were only slightly swollen and the patient physically was in a fair condition of health, I considered it a better case for combined internal operation than for a radical external one.

The first operation was on the 19th, three days after admission. It was divided into three stages. First, under ether, at my request, Dr. Beatty tied the common carotid in order to control subsequent hæmorrhage. Second, while the patient was still unconscious, chloroform was substituted for ether, and I dissected out as much of the tumor through the mouth as I could. Third, I cauterized the base of the growth with the electro-cautery at a white heat. It was impossible to remove every portion of the growth at this operation. Still it cleared the way widely for future effort. There was much hæmorrhage notwithstanding the ligation of the artery. The patient came out of the anæsthetic well, suffered little pain and expressed himself as more comfortable than he had been for weeks. Soft food was readily taken and he slept well.

During the next two months there were a number of cauterizations with the electro-cautery, all under cocaine, the intervals between the treatments gradually increasing in length. The last was done on January 19th, exactly two months after the first operation, the intention being to destroy all reforming epitheliomatous granulations.

Three days after the last cauterization an event similar to the one recorded of case eight occurred. The external throat

condition became almost identical, while deglutition and respiration remained almost unimpaired. My impression was that the deep tissues of the neck, which could not be reached by operation, had become involved, and as swallowing and breathing could be carried on the best thing the patient could do would be to return to his home in the country and under the care of his physician await the end.

Six weeks later his doctor wrote me that the swelling in the neck finally broke and discharged very freely, thereby relieving the patient. He was in other respects much the same, although he said that the tumor in the throat was again reforming. The patient himself wrote me that he was coming down soon to see me. Since then he has grown rapidly worse. The end is near.

The pathologist pronounced the disease epithelioma.

Case ten, the last of the series, is a particularly interesting one.

On January 31st, 1912, Mrs. W. J. L., aged 52, a lady of culture and means, formerly a distinguished vocalist, who had been a throat patient of mine off and on for twenty years, consulted me about a growth in her right nostril. It had been coming on for a number of weeks. It was much inflamed, occluding the passage and attended by stinging pains which shot up into the ear and side of the face.

On examination I found the central portion of the inner aspect of the right alar and lateral cartilages covered by a reddish, irritable growth, the thickness of a quarter of an inch, and coated with muco-pus. On cleaning the part and applying cocaine and adrenalin the growth became clearly defined. It was circumscribed and flat, leaving a clear margin of mucous membrane above and below and backwards between it and the anterior margin of the nasal bone. The nostrils of the lady were naturally clearly defined and delicately formed, but this wing of the nose was altogether more than three times the thickness of the other in its central portion. The redness extended all over the ala of the nose outside as well as in, and even the external skin was tender.

I decided, as it was growing rapidly, to operate the next day. Chloroform was administered. I then excised the growth with a scalpel. Bleeding was quite free. As soon as this abated, the patient still under the anæsthetic, I applied the electro-cautery very freely over the inner surface and destroyed every portion of suspicious-looking tissue.

The pathologist made a very careful examination of the growth and pronounced it a case of undoubted epithelioma.

On coming out of the anæsthetic the patient was fairly comfortable and declared herself completely relieved of the stinging pains. The only application was simple white vaseline.

A few days later the patient came to my office, and as suspicious granulations had formed I cauterized two or three under cocaine. Six days later this was repeated. No further development occurred for thirty-two days, when spots were cauterized again. Two weeks later there was a more visible return of the growth in the form of a small ulcer on the top of an inflamed central area. So I decided to remove it again under chloroform the next day. But when twenty-four hours had passed it had trebled in size. Again it was removed by electro-cautery. In three more days there was another return, with a slight extension to the very margin of the nostril. Again the chloroform and again the cautery to each portion more effectually than ever.

Notwithstanding all these severe burnings, no part of the cuticle had been sacrificed, neither had any portion of the normal cartilage been destroyed. The contour of the nose would still be perfect if the regrowth could only be arrested. But I began to realize that while the growth could be positively destroyed with the electro-cautery, it was very doubtful if by its use alone redevelopment could be prevented.

So I decided to have radium employed. Dr. W. H. B. Aikins kindly came to my aid at once, and before the granulations had time to form again he applied twenty milligrams of the bromide of radium externally and a tube into the passage. This was repeated several times. I need not enter into the particulars of his treatment. But I may say that for the past six weeks the patient has been under our mutual control, and by careful and painstaking management no suspicious granulations whatever have formed during that period. It looks at last like a cure, but no doubt careful watching will be required for some time yet to insure so favorable a result.

It may be asked why, in this last case, did I not resort to the use of radium at the very first? My answer is that I feared any delay might be disastrous The delicate tissues of the nostril were so deeply involved that immediate destruction of the malignant growth became imperative, and the action of the cautery would be positively quicker than the action of radium. This, I believe firmly, while at the same time it is equally clear, from the history of this case, that the judicious use of radium has prevented the reformation of the malignant granulations.

The amount of radium used might be estimated at one centigramme for twenty-four hours. The total number of applications being five—a cross-fire being induced by a plaque of the bromide of radium being placed outside and a tube within the nasal passage.

No.	Sex	Age	Duration When First Seen	Diagnosis from Path. Reports, Etc.	Period During Which Oper's were done	How Long Since Last Oper.	Present Condition if Alive	Result	Remarks
1	M	23	4 Years	Sarcoma of Nose	6 Months	19 Years	Excellent	Cure	Strong and Well
2	M	50	2 Years	Sarcoma of Nose	2 Months	10 Years	Fair	Cure	General Break Up of System Old Age
3	M	21	3 Years	Sarcoma of Nose	6 Years	4 Years	Very Good	Cure	Strong Stout Well
4	M	58	A Year	Sarcoma of Nose	6 Weeks	Lived 2 Months After		Death	No Return of Growth Died of Septicæmia
5	M	35	9 Months	Sarcoma of Nose	2 Months	2¾ Years	Good	Cure	Ordinary Health
6	M	21	Several Years	Sarcoma of Nose and Naso-Phar.	2¼ Years	9 Months	Very Good	Not Yet Cert.	Too Soon to be Sure
7	M	18	Several Years	Sarcoma of Naso-Phar. and Nose	2¾ Years	3 Months	Very Good	Not Yet Cert.	Too Soon to be Sure
8	M	21	3 Months	Sarcoma of Larynx	15 Months	3 Days	Fair	Doubtful	No Hope
9	M	72	Nearly a Year	Epith. of Pharynx	2 Months	4 Months	Unfavorable	Prognos. Hopeless	Treatment Prolonged Life
10	F	52	A Few Weeks	Epith. of Nose	3 Months 2 Caut. and 1 Rad.	Still Treated by Rad.	Good Health	Prog. Good	Caut. Des. Growth. Rad. Prev. Return

AUTHOR'S NOTE:—*Five months later:*

Case Six. There has been no return whatever of the disease. This makes the interval fourteen months since last operation. Case seven. Also no return. Interval since last operation eight and one-half months. Both cases may now be considered cured.

Cases eight and nine, both succumbed. The one to sarcoma of the larynx, the other to epithelioma of the pharynx.

Case ten. During the five months there has been no redevelopment of the epithelioma. The nose has a healthy, normal appearance. The nervous sensitiveness of the organ has all passed away; and the patient is in excellent physical condition.

PRICE-BROWN.

THE LOCAL MEDICAL EXAMINER AND LIFE INSURANCE*

By B. G. Connolly, M.B., Renfrew.

In selecting a subject on which to make a few observations, I feel no apology need be offered for choosing one outside those topics most commonly considered at gatherings of this kind, when we consider the potent factor life insurance has become in the social economy of to-day.

Without going into statistics, a mere glance at what is going on around us—the great amount of insurance afforded by the various fraternal societies—the enormous sums carried by the many insurance companies, domestic and foreign,—the solicitude with which the governments through legislative enactments endeavor to protect alike the insurer and insured—is sufficient to convince anyone of the importance of the question. And it is common belief that life insurance is as yet only in its infancy.

One of the foundation stones of this immense fabric is the medical examiner. Should he fail in integrity or proficiency —which rarely occurs—incalculable harm must result to society, for the failure of any insurance organization entails ultimately, if not directly, great suffering to the widows and orphans.

The success of all insurance institutions depends on

1. Wise medical selection.
2. The charging of proper premiums.
3. Prudent, honest management.

The failure of anyone of these divisions long continued may result in disaster to the whole structure.

The medical department is the one to be considered now. It consists primarily of the local medical examiners, situated throughout the whole country who make the examinations of the applicants for insurance, and forward the results of their examinations to the head office of the company, where the papers are considered by a committee of whom one is the medical director of the company. When a physician undertakes an examination for a company or a society, he, for the time being is the officer of that company or society, regardless of

* Read at the meeting of the Ottawa Valley Medical Association.

who pays the fee and is by every rule of morality bound to give the company an exact picture of the subject under examination, as he finds him, because on the strength of that picture depends largely whether the subject is rejected or accepted, or on what conditions he is accepted. The law of mortality is now reduced to an exact science and the calculations can only be upset by some error in selection.

How can the medical examiner most satisfactorily discharge the service expected of him is a pertinent question. The company furnishes forms which consist of two parts and contain a number of questions, the intelligent replies to which are the means by which those in charge at head office judge of the eligibility of the applicant for insurance.

Part 1 consists of a number of questions, the replies to which must be furnished by the applicant, and for the truth of which he vouches by his signature, witnessed by the medical examiner. This forms the basis of the contract between the applicant and the company.

Part 2 has a series of questions to be answered by the physician as to the physical condition of the applicant and for the correctness of which he certifies by his signature. If all the questions are answered and the papers signed and sent to head office the examiner's duty usually ends there.

Should the questions for one reason or another not be satisfactorily answered, the papers are returned to the examiner to be completed which is always a source of annoyance to him —a cause of delay to the company and applicant, and often works an injustice to the agent.

The matter with which we are principally concerned is how should the examiner so do his work, that the interests of the company, the applicant, the agent, and the examiner himself, may all be conserved? Considering the report as a whole, when it is possible, the most satisfactory answer, when the question will permit of it, is "yes" or "no." Such an answer when it can be given, leaves no room for speculation. However, all replies should be full and complete. When "yes" or "no" will not suffice make the reply as brief as completeness will permit.

With regard to the second part of the report very little dissatisfaction is ever found. The high moral standard regulating the profession is nowhere seen to better advantage than in the way in which these examinations are conducted. The number of lapses from this standard is so small as to be almost a negli-

gible quantity and the co-operative vigilance of the companies usually discovers the offenders sooner or later.

It is with the making out of the first part of the report that greatest difficulty will be found—not that the applicant desires to give wrong answers or none at all, but the mental bias, if I may use the term, in favor of getting what he is seeking and the desire to avoid a rejection, leads him unconsciously to color the picture he presents for consideration of the examiner. In insurance work, the observations of the examiner must be clear cut and decisive, in this respect differing from those usually obtained in ordinary medical practice when successive opportunities for examinations occur and first impressions may be confirmed or corrected. In the case of the insurance examination, everything presses for haste. The applicant may have come quite a distance and will not return unless urgently required. The agent is anxious to have the matter closed up, lest an enterprising rival intervenes to change the mind of the applicant, and in this way deprive him of his commission, or, as is often the case, the putting on of insurance is the impulse of a moment which if not properly seized, the lapse of time and the advice of friends may change and the agent will again be the sufferer and sometimes unfortunately the family of the intended insurer. At any rate, the display of greatest tact and judgment are necessary to see that justice be done all the parties to the transaction.

The conscientious examiner requires great practice and much skill to elicit intelligent replies to the questions propounded. Of course, age and date of birth demand positive answers. Age of living members of the family require to be approximately correct and statements as to health accurately given. It will be when dealing with age at death, and cause of death of deceased members of the family history that care is required. For instance, if applicant states that a parent died at 35, and cannot give cause of death, and no satisfactory explanation why he cannot, it is commonly from one or two causes, he is either densely stupid or desires to deceive. Here the tactful examiner may assist both the applicant and the company. He can ascertain the length of illness, the symptoms of disease, perhaps, who the attending physician was, whether the deceased has brothers or sisters living or dead; if living, their ages and state of health; if dead, age at death and cause of death with length of illness, as the necessity of the case will indicate. This and like information the value of which is well

known to the examiner, if communicated to the company when the necessities of the case demand it, will be appreciated, as it will greatly assist in assigning proper value to the applicant as an insurance risk. The same process of treatment may have to be given where the applicant professes ignorance of the cause of death of a brother or sister.

Answers such as "childbirth," "change of life," "bad cold," etc., are meaningless, as every well-informed examiner knows, and patient effort must be exercised to elicit the real cause and properly describe it. When consumption appears in the family history, inquiry should be made as to the number of times it has appeared in near-relatives, and a statement made so far as can be ascertained, showing what was the length of illness of sufferers, and whether the applicant lived in same house with consumptive patient, for what length of time he did so and what time has elapsed since then. A succinct statement of these facts will obviate the necessity of correspondence from head office.

If the applicant shows a departure from standard weight to the extent of great overweight or marked underweight, inquiry should be made as to the cause of this, how long the condition has existed and whether it is a family trait or not, and if so, in how many members of the progenitors it has exhibited itself.

It is important to ascertain in overweight subjects whether the overweight is due to well developed muscles or to the formation of fat. If the examiner fails in any of these cases, in eliciting satisfactory information, the attention of the agent should be called to it that he may assist in elucidating the matter if he can.

Another matter which may seem of trivial importance, but which is always open to objection is the use of "ditto marks," "question marks," and similar symbols in answer to questions. They should not be used in this connection and answers should be plainly written in full.

Another point of interest to the local examiner is the sphygmomanometer. A very great aid in diagnosis has been evolved within the last fifteen years in the perfection of an instrument of precision to measure blood pressure, *viz.*, the sphygmomanometer. The importance of blood pressure has long been recognized, and the tactile properties of the physician's fingers have been more or less perfectly educated to measure it. But the sphygmomanometer in registering blood

pressure stands in the same relationship to the finger, that the stethoscope or the phonendoscope bears to the unaided ear in detecting respiratory or heart sounds, and now after a somewhat extended use, it is regarded as one of the most important additions made to the armamentarium of the physician in recent years. Certain insurance companies make its use obligatory in all examinations where the applicant is over forty years of age, and when the reading shows the pressure to register over 150 mm. of mercury, the applicant is rejected, feeling that the high pressure is the forerunner of albuminuria or apoplexy within a few years. Although in many cases a person with a high blood pressure may live to old age, yet the reverse is only too often the case, and blood pressure of 150 to 180 is a sure precursor of impending trouble. In case of high blood pressure being discovered, several readings should be made on successive days to eliminate possibility of error, but if these readings show a pressure uniformly above 150, the indication must be taken as a danger signal. Several instruments are in use, each with some special feature to recommend it. A convenient one is Roger's "Tycos." The technique is simple. Pressure is exerted on the arm by means of the cuff dilated by the bulb until the radial pulse is obliterated. Pressure is then relaxed until return of the pulse is noted when the reading is made. This can be repeated two or three times in as many minutes until the average is taken, which will be about the correct reading for that time.

Personally I regard the instrument of such importance in private practice that I believe every physician should have access to one. In the making of insurance examinations, it will before long be indispensable in certain examinations as most companies will demand its use.

The importance of correct urinalysis is so generally understood that it is scarcely necessary to refer to it. The technique of this as adopted by the Association of Life Insurance Directors and described in circular letters by various companies, is easy to carry out and gives satisfactory results.

The observation of the various hints I have ventured to suggest may entail a good deal of trouble at the time, but ultimately will prove a source of satisfaction to all interested, but probably to none more than the local examiner himself.

THE ONTARIO PUBLIC HEALTH ACT

By John W. S. McCullough, M.D.
Chief Officer of Health for Ontario, and President-elect Canadian Public Health Association.

The Public Health Act of the Province of Ontario revised by the Legislature of the present year may briefly be considered under its chief headings.

First, Organization.—This embraces a Provincial Board of seven members who meet at intervals of three months and act chiefly in an advisory capacity. The Secretary or Chief Officer is the executive officer of the Board and possesses in the interval between meetings all the powers of the Board. There is a Chief Inspector and Sanitary Officer, and the Province (which embraces an area of some three hundred thousand square miles) is divided into districts, to each of which is attached a medical officer. These officers are at the present time being trained for the practical duties of their work.

There are three laboratory centres—one each at Toronto, Kingston, and London—and arrangements are being made for increased facilities for the examination of diphtheria cultures, blood samples (Widal test) and sputum by distribution to the various Medical Officers of Health, in the eight or nine hundred municipalities of Ontario, of supplies of sputum bottles, culture tubes and slides, from whom these may readily be procured by physicians. The physicians may have examinations made for diagnostic purposes free of charge at any of the centres named. In the same manner, examinations of water supplies are made for municipalities or individuals free of cost when the samples are sent in properly sterilized containers (which are supplied through the M.O.H.).

Local Boards of Health in the various municipalities are continued, places of 4,000 and over having five members and municipalities of a smaller population, three members. The Medical Officer of Health becomes a member of the Local Board, and its executive officer. His tenure of office is made more secure by the enactment that he may not be dismissed except for cause and with the consent of the Provincial Board. This condition and the fact that municipalities are required to pay a reasonable salary—and also the expenses of the Medical Officer of Health to the Annual Conference of Health Officers—

will, it is hoped, have the effect of increasing the value and efficiency of such officers and be in the interest of public health generally.

The second topic dealt with by the Act is the important one of *Isolation Hospitals and Communicable Diseases.* The plans of these hospitals, their equipment, etc., will become more uniform and satisfactory since they are required to be approved by the Board. Provision is made for arbitration in case a dispute arises over the establishment of such a hospital by one municipality in another municipality. The local board is given the control of such institutions and they must be maintained in accordance with the Provincial Board's requirements.

The care and control of communicable disease is definitely defined, not only by the Act, but by the regulations made thereunder. Tuberculosis is added to the list of notifiable diseases and the regulations provide for more easy and safe transportation of bodies dead of the various communicable diseases.

As long as the writer can remember, it has been the privilege of the local physician to treat without any remuneration the poor of the community. It is to the credit of the medical profession that almost without exception our members have never shirked this duty. When, however, as I am certain most of you have observed, the municipality contributes to the wants of this class for other necessities by paying their bills to the grocer, coal man, etc., it seemed but fair that the physician should not be singled out as the only philanthropist in the community: so the Health Act provides that in cases when indigent persons are not provided for in a hospital, the municipality shall contract with some qualified practitioner for their care in case of injury or illness. In this way the whole community will, as seems but right, have the opportunity and pleasure of assuming its share of this duty.

This is a large and growing question. It is not always the easiest task to define just what a nuisance is, so the Act (relying upon the usual good sense of the Medical Officer of Health) assigns to him that duty and defines what must be done to remedy the conditions complained of.

Offensive Trades, Inspection of Lodging Houses and Dairies, all come within the purview of the Act. In respect to lodging houses, one important provision increases the necessary air space from 400 to 600 cubic feet and gives the Medical Officer of Health power to close and placard a house which in his judgment is unfit for human habitation.

The power given to municipalities to establish abattoirs wherein animals may be slaughtered under competent inspection is of the greatest necessity, from the fact that various diseases may be transmitted from animals to man. The Act provides that where such an abattoir has been established by a municipality and an inspector appointed in accordance with the Act, no meat shall be offered for sale or sold therein unless it has first been inspected and bears the stamp of the municipal, Provincial or Dominion meat inspector.

The old *Public Health Act* contained a by-law, known as "Schedule B," which automatically was in force in every municipality. This by-law, which outlines a law suitable in a general way to most municipalities, has been revised and may not be amended by municipalities except with the consent of the Provincial Board.

The large unorganized areas of the Province are continued under the direct supervision of the Board. Two District Officers and a Sanitary Inspector are assigned for this territory and special regulations are in force therein for the protection of the employees of lumber, mining and construction camps, and for the suppression and prevention of communicable disease in these regions.

Some of the cities and towns of the Province have had their share of typhoid fever. By far, the greater proportion of these epidemics have arisen from the culpability of the municipal authorities in respect to proper water supplies and the disposal of sewage. It usually requires two or three epidemics of this disease, and a large death rate, to arouse the public to a sense of its danger. Nothing, I regret to say, seems to arouse the majority of the members of a municipal council—except the fear of defeat at an election. Within the last two years there have been in one city of the Province at least 2,500 cases of typhoid fever due to bad water, and the council of this municipality have only recently taken the preliminary steps to procure a good supply—and then only when they found that the present Public Health Act was strong enough to force them to do so.

In respect to water supplies and sewage disposal, the entire control of these matters is placed in the hands of the Provincial Board. The plans, specifications and all details must be submitted and approved. The approval must be cited in the by-law to raise money for these purposes. If the Provincial Board certifies that improvements of this character are necessary, it

is not necessary to take a vote of the people for such purposes. My attention has been called to a statement by the solicitor of a certain city, who gives a contrary opinion in respect to this Section (96) of the Act. The best reply to this is that several municipalities have already taken advantage of this portion of the Act and the debenture solicitors have accepted the Board's certificate. Further, the Act gives the Board power to enforce the improvement, repair and maintenance of any existing waterworks or sewerage system.

The day of the reckless pollution of the magnificent streams and lakes of the Province is drawing to an end. Already, every municipality has been notified to take steps to properly dispose of its sewage. It will take years to attain our ideals of this condition, but an early beginning is at least gratifying. No one, it seems to me, has a right to pollute a stream to the disadvantage of his neighbor below him, and, if a municipality is liable for damages for defective streets and sidewalks, it should be held equally liable if it knowingly supplies poisoned water to its citizens.

CONGRESS OF SURGEONS OF NORTH AMERICA

By John Hunter, M.B., Toronto.

The lot of the physician is no exception to that of his fellow-beings in other vocations. He has work to do, and as he grows weary at his task, he is very apt to take a somewhat pessimistic view of life. When he thinks of the achievements of the statesman, financier, business, or industrial magnate, and of the place these hold in the estimation of the public, does he not feel a pang of remorse over his choice of a vocation that rather isolates him from politics, from commercial enterprise, and from the more important functions incident to social and public life?

Transport the physician from the quiet routine of his "daily rounds" to a great congress, such as the one held in New York, Nov. 11th-16th, and his pessimism vanishes like a morning mist before the rays of the rising sun. When he sees the work that scientific culture, intellectual acumen, and skilled hands can do, and when he thinks of the unselfish, and beneficent character of it, as exemplified, every hour, day and night, throughout the whole year, his erstwhile drooping spirits soon begin to show signs of returning vitality. In fact he is very prone to become so enamored with the sublimity of his vocation, that he begins to doubt if there be any other at all comparable with it.

The third annual session of the Clinical Congress of Surgeons of North America began on Monday morning, Nov. 11th. About 2,200 physicians and surgeons (mostly of the latter vocation), assembled in the Waldorf-Astoria, at an early hour, in order to register, and to get the daily bulletin—which was quite a large four-page sheet, surfeited with the variety, and extent of the work to be done in fifty or sixty different hospitals. The eye immediately caught the names of a dozen of men, each one of whom challenged attention. However, it did not matter so much if you did not get to the hospital you selected, for wherever you found yourself, there was sure to be something of absorbing interest going on. Each daily programme contained clinics in general surgery, gynæcology, obstetrics, genito-urinary surgery, orthopædics, surgery of the eye, ear, nose and throat, and demonstrations in radiology, pathology,

and other specialties. These clinics and demonstrations were given by the leading surgeons and clinicians. They began about 8 a.m., and continued until 5 p.m., and included operations for about every pathologic condition amenable to surgical skill.

SURGICAL CLINICS.

These were so numerous, so varied in character, and given in hospitals so widely separated, that one was unable to take in more than two or three each day. There was enough interesting material for volumes, but time and space, oblige the writer to confine this article to a very brief summary of two clinics, and of the first evening session. The surgical clinic that attracted the most attention, was given by Mr. Arbuthnot Lane, of Guy's Hospital, London. It was held in the main operating room of the Polyclinic Hospital, under the chairmanship of Dr. Wm. Seaman Bainbridge. Mr. Lane exhibited the use of his "plates" in an ununited fracture of radius and ulna, also in a compound fracture of tibia and fibula, under spinal analgesia. He demonstrated his method of treating chronic intestinal stasis—Lane's kink—by short-circuiting the ileum with the sigmoid—ileo-sigmoidostomy. In a case with carcinomatous stricture of the transverse colon, by complete colectomy, with ileo-sigmoidostomy. During the interval between his first and second operations he came into an adjoining room, and gave a short address to an over-flow meeting. In many of his statements he seemed rather hypercritical. He gave a scathing criticism of the medical treatment of morbid conditions in the alimentary tract. He said the physician, with the administration of poisonous drugs to relieve gastric disturbances, and intestinal stasis (constipation), was unconsciously bringing about end results, *e.g.*, cirrhosis of the liver, and of the kidneys. He poured ridicule on the value of the "test-meal." He did not limit adverse criticism to the work of the physicians, for he called in question the veracity of surgeons for saying that the results in so many of their cases were good when the subsequent history of these often showed much suffering, or disability. He read the report of a commission appointed to investigate the merits of the "Lane's plates" in the treatment of fracture. On the whole the report was favorable.

The position of the general practitioner in regard to these new innovations is somewhat akin to that of the ancient mariner, who, in trying to avoid Scylla, fell into Charybdis. If he use splints instead of "Lane's plates," and any untoward result

happens, he may be mulcted, or an insurance company may refuse to pay any claim on account of inefficient treatment. On the other hand, if he send all his fracture cases to the hospital to have the plates used, he not only loses his fees, but suffers in reputation as well. Again, if the end results of the use of drugs in intestinal stasis be cirrhosis of the liver or kidney, may not the end results after removal of the colon be malnutrition, and its sequelae?

Mr. Lane was exceptionally well received, not only on account of his reputation as a great surgeon, but the charm of his audacity was irresistible. His castigation of friend or foe alike, called forth frenzied applause.

WILLEY MEYER.

We had in this great German-American surgeon a very different personality, from Mr. Lane—Meyer is rather short in stature, very stoutly built and speaks and works with calm deliberation. He removed about three-fourths of the stomach —the portion involved in a malignant growth. The walls of the stomach beyond the pathological area were firmly pressed together by a wide clamp, attached to a surgical sewing machine which was used to make the sutures. The material used was small wire staples, the sharp ends of which were driven through the compressed walls of the stomach and bent up on the under surface. An incision was made between the double rows and the growth removed. A gastro-enterostomy was done between the remaining portion of the stomach and the intestine. To the on-looker the operation seemed a hazardous one, but it was performed with great skill, and consumnate deliberation.

GENERAL SESSIONS.

The first of these was held on Monday evening, November 11th, in one of the large assembly rooms of the Waldorf-Astoria. Here the congress made another appeal to all that is best in scientific medicine. The environment brought enchantment to the scene. The spacious ball-room is embellished by massive pillars, supporting two balconies, and by paintings on the ceiling of mythical feminine figures playing musical instruments. The President, Dr. Ochsner, of Chicago, and the President elect, Dr. Martin, of Philadelphia, and the group of distinguished men who accompanied them were enthusiastically greeted as they ascended the platform. Dr. Ochsner referred

to the question of the physician's literary culture. He said that in any list of those who have attained national repute the possession of an Art's degree did not seem to have been an important factor in acquiring such distinction, as men without this literary equipment were easily the peers of those who possessed it. However, he immediately qualified this statement by saying that while this held true for the present, it probably would not do so for the future, on account of the greater facilities now available for acquiring a university training. Drs. Wm. Mayo, Murphy, Jacobi and others were introduced and gave short addresses. One characteristic of all the addresses was the emphasis placed upon service. Any who came simply to acquire knowledge in order to enhance their own interests and reputation, were misconstruing the purport of the Congress, *viz.*, to fit men for a more efficient service in the interests of humanity and of scientific medicine.

Dr. Martin, President elect, read a paper on the surgery of the liver. He believes that rather too much importance has been attributed to some of the functions of liver. He suggested the use of pieces of muscular tissue through which the sutures would pass on entering, and emerging from the substance of the liver. This would prevent the sutures from cutting out. Dr. Wm. Mayo's paper was on the surgery of the spleen. He called attention to the development of the spleen in early embryonic life when all the blood cells were white. The function of the spleen in relation to the production of blood cells seems to decrease in importance in proportion as the red cells exceed the number of the white ones. Removal of the spleen does not seem to produce any profound change in nutrition.

Selected Articles

PNEUMOCOCCAL MENINGITIS

By Dr. Lafforgue,
Medecin-Major (premiere classe); Professor Val-de-Grace.

The meningitis which results from pneumococcus invasion (pneumococcal meningitis) has already had an extensive history, clinical and bacteriological. It owes to the important memoir of Netter ("De la méningite due au pneumocoque, avec ou sans pneumonie," *Archives de Médecine,* 1887) the position which has ever since been assigned to it in nosology. A number of subsequent investigators—German, American, Italian—have contributed to make it known; and the researches in France of Boulay (*Thèses de Paris* 1890-91), of Hutinel (*Semaine médicale* 1892), of Grasset (*id.,* 1894), and of Scherb (*Thèses de Montpellier,* 1894-95) deserve special mention here. Nevertheless, it was until within the past few years frequently confounded with cerebro-spinal meningitis. But pneumococcal meningitis has re-established its definite autonomy in proportion to the increased precision of the identification of the meningococcus. And at the present date it appears to us as an affection which is clearly individualized, and readily lends itself to nosological description. Following the example of Netter, we are here dealing separately with the meningitis which is associated with pneumonia, and that which is independent of every pulmonary influence. In addition, we reserve a place in our study of the subject for certain meningeal conditions which have arisen in the course of pulmonary pneumococcus invasions, and to which the term meningitis would not duly apply. These we propose to study under the heading of *parapneumonic meningeal pneumococcosis,* so as to indicate simultaneously their necessary differentiation from cases of meningitis, properly so-called, and their habitual coincidence with a pulmonary process.

A. *Pneumococcal Meningitis Associated with Pneumonia.*—Here there are three eventualities possible: (1) The precedence of the pneumonia—which may be from a few days to (a maximum of) three weeks; (2) the simultaneous appearance of both affections; (3) the precedence (or apparent precedence) of the

meningitis. The following considerations apply to all these three cases, without much variation.

I.—Ætiology and Pathogeny.

The proportion of cases of pneumonia that are complicated with meningitis is very variable (from 0.13 to 8 per cent., according to dates and localities). Two-thirds of the cases occur in the male sex. The degree of receptivity reaches the maximum at the two extremes of age: in the first year of infancy, and among old people after the age of sixty-five. In case of adults, the maximum is reached between forty and fifty years; overstrain of the nervous system, cerebral propathy, renal or hepatic failure, certain physiological conditions (such as pregnancy or lactation) or pathological states (such as extreme poverty, starvation, cachexia, etc.), *alcoholism* (which has been noted in more than one-third of the cases)—these are the most efficient of the known predisposing causes. Among the extrinsic factors, latitude and climate are but of relative importance. But this cannot be affirmed of certain *epidemic conditions,* which are met at variable intervals, and of which the *rôle* is as manifest in its influence as mysterious in its nature. Under their influence, in regions which had previously enjoyed apparent immunity, there may be developed a very severe outbreak of pneumococcal meningitis. These may then appear in unusual proportion (in Erlangen, for instance, making 8 per cent. of the cases of pneumonia), after having been absent for years. This abnormal frequency of cases of meningitis habitually coincides with the occurrence of other extra-pulmonary localizations of the pneumococcus: in endocarditis, pericarditis, nephritis, etc. It is in such cases that we see pneumococcal meningitis spreading in epidemic form, like pneumonia itself. Usually circumscribed by conditions of habitation—in single families or grouped collectively (as in barracks, convents, schools and prisons)—these epidemics sometimes extend to a whole village, or town, or city. They rarely spread further, and in this way they differ in course from epidemics of cerebro-spinal meningitis, from which they are further distinguished by less tendency to reappearance in successive years. Instead of the regular and almost rhythmic recrudescences which characterized the epidemics of cerebro-spinal meningitis in the 19th century and the beginning of the 20th, they have presented but rare epidemic manifestations, and those separated by long intervals (focal centres appeared in Prussia, Saxony and Silesia in the period which ranged from

1863 to 1868; Italian foci appeared later at Turin and Milan, and the New York epidemic in 1873). On the other hand, an habitual feature of pneumococcal meningitis is the appearance of sporadic cases, not grouped, which display themselves side by side with epidemic cases of cerebro-spinal meningitis in such a way that clinical history alone would be insufficient to distinguish one from the other. Many cases of this class occurred in 1898, 1899 and 1900. This interesting fact seems to prove that the circumstances—probably external—which govern the affinity of the meningococcus or pneumococcus for the meninges are either identical or closely allied.

What, then, is the pathogeny of pneumococcal meningitis associated with pneumonia? According to the explanations (notoriously insufficient as they now are) of Gubler, there have been successively incriminated: venous stasis of the brain (Verneuil), reflex influences transmitted by way of the sympathetic (Laveran), and embolic metastases (Lancereaux). This last-mentioned author attributed the meningitis to emboli detached from the endocardium. But, as a matter of fact, endocarditis is absent in two-thirds of the cases of pneumonia which are complicated with meningitis. It is nevertheless probable that the embolic theory of Lancereaux applies accurately to some cases. Salvy maintained that the meningitis should be regarded as a pyæmic localisation, as it always coincided with the occurrence of pulmonary suppuration. But in a series of 120 cases analysed by Netter, suppuration of the lung was found but in 17—that is to say, in 14.17 per cent.

It is necessary to hold definitely to the thesis which was so brilliantly sustained by Netter in 1887, and was based by him on decisive demonstration, that: *the passage of the pneumococcus into the cerebro-spinal fluid is the causal factor of the meningitis.* The proposition is now trite, indeed; but at the date of its enunciation it represented a very advanced view. By 1878, Professor Grasset had enunciated the opinion that in cases of duplex localisation, pulmonary and meningeal, we had to deal with "a duplex manifestation of the same cause." And this proved to be a clinical intuition of the most exact and suggestive type, which came to be demonstrated bacteriologically by Netter. The pneumococcus may attack the meninges by one of two different routes—(1) starting from the pharynx (Cornil), the nasal fossæ or sinuses Netter, Weichselbaum), the tympanic or labyrinthine cavities (Netter), where it colonises normally in case of pneumonia, the germ passes into the meninges, either along the blood-vessels or lymphatics or the lymph-sheaths of the

nerves; (2) the pneumococcus may pass directly from the general circulation into the cerebro-spinal fluid. Thus we have two pathogenic mechanisms, either of which is able to account for the invasion of the meninges—that of a *local infection* passing on from one stage to another, and that of a *general infection*—a *septicæmia*—with selective localisation in the meninges. Netter is inclined to believe that the latter is the more usual mechanism. But our recent additions to knowledge of the course of primary pneumococcic septicæmia do not tend to corroborate this view.

II.—Symptoms.

The initial pneumonia presents symptoms and habitual signs. In this connection three remarks must be insisted on—(1) the process in the lung does not always take on the classic type of lobar pneumonia; the types of pulmonary congestion, of spleno-pneumonia, of bronchitis, etc., are sometimes observed. (2) Not infrequently the lesion is located in the apex. (3) The period of invasion of these pulmonary lesions conveys frequently some symptomatic peculiarities which would seem to indicate the influence of a precocious meningeal reaction: violent headache, photophobia, retro-cervical pain, *vomiting*.

The symptoms of the meningitis properly so-called vary according to whether the process does or does not engage the whole extent of the surface of the cerebro-spinal axis; whether it predominates over the convexity—which is the rule—or affects to an equal degree the various areas of the surface of the brain, etc. In basing a classification on the features of evolution we may distinguish *four* clinical types:—

(1) *Hyper-acute, or Apoplectiform.*—This is the most interesting of the types, because the development is insidious, and it lends itself to errors of prognosis which are almost inevitable. The meningeal complication may appear either in the course of the pneumonia, or after the resolution of the latter has been completed. The following note of one of our own cases is an example of the parapneumonic type:—

X was admitted to the Val-de-Grace, 18th February, 1911; after an illness of some days. The onset had been marked by a rigor, without localised pain in the side; accompanied by cough and sanguinolent sputa and very severe headache with photophobia and vomiting. On admission, he was found to be the subject of pulmonary consolidation of the lower lobe and a portion of the middle lobe, on the right side. At that period the meningeal signs were so far defaced that except for the sugges-

tive ones referred to (headache, vomiting) attention would hardly have been attracted to the meninges at all. Lumbar puncture drew off a limpid fluid, which flowed without showing tension. Microscopic examination, after centrifugalisation, failed to reveal a *microbe of any kind;* but, on the other hand, there was a *very pronounced* and *almost pure lymphocytosis.* Cultures proved sterile. Precipitin reaction was negative.

Next day the patient's condition remained the same. But, in the course of the succeeding night, the meningeal syndrome established itself with extreme brusqueness. The patient lost consciousness; uttered unintelligible phrases; displayed extreme agitation; the face was of earthy hue, the nose pinched, the facial muscles twitching, the eyes rolling in the orbits. Myoclonic shocks passed through the upper limbs. Kernig's sign, which had been absent in the evening, became very distinct; rigidity of the nucha was very marked; the abdominal wall was retracted; the vomitings were repeated; incontinence of urine and of fæces appeared; and the oculo-pupillary reflexes were but little modified. There was no local paralysis. Another lumbar puncture yielded a very suspicious-looking fluid, which contained numerous pneumococci and polynuclear corpuscles. Death occurred in the course of the day. The autopsy displayed the typical lesions of pneumonia, and of a meningitis which extended along the whole length of the spinal column, and without any other noteworthy visceral lesions.

Netter's memoir gives the history of a case of a metapneumonic meningitis which belonged to the same evolutionary type as the above. An insidious development of meningitis on a gross scale, very rapid and fatal evolution—with a symptomatology almost dramatic in intensity—such are the principal characteristics of the apoplectiform type. It should be observed that, in our case, the cytology permitted from the onset the suspicion of the approach of a meningeal complication; nevertheless it was but a slight presumption, having regard to the fact that lymphocytosis is a familiar phenomenon in the course of the most varied infections and intoxications. Also, this apoplectic variety is sometimes complicated with hemiplegia, aphasia, etc.

(2) *Acute.*—This is the most usual form; in this case the meningitis develops progressively, and reaches its acme in the course of some days. As the lesions are most pronounced on the convexity, the headache is very pronounced and appears at an early stage; and Kernig's sign, which is nearly constant, indicates the habitual participation of the spinal meninges. We again note the rigidity of the nuchal muscles, vomitings, deliri-

um, incompetence of the sphincters, varied modifications of the oculo-pupillary reflexes. Paralyses of the limbs are exceptional; those of the cranial nerves are less rare—particularly of the facial and auditory—especially when the exudate has been very copious at the base.

(3) *Sub-acute.*—Here the meningeal syndrome is but very slightly developed, and runs a transitory course. It is to cases of this type that the epithet of *meningism* has long been applied. Many of them are related to the parapneumonic meningeal pneumococcosis, which is described below; their course and evolution are favorable.

(4) *Chronic.*—Does a chronic type really exist—that is to say, acute meningeal lesions naturally evolving towards a cure? The occasional cases which have been indicated do not carry with them a degree of absolute conviction; the lumbar puncture not having served as criterion to the diagnosis. Those cases of spontaneous cure belong, possibly, to genuine cerebro-spinal meningitis.

III.—Pathological Anatomy, Cytology, Bacteriology.

The pulmonary lesions vary in intensity. Of 120 cases which were collected by Netter, there were 3 of pulmonary abscess, 14 of purulent infiltration, 25 of gray hepatisation, 18 of red-gray hepatisation; the remainder conformed to the type of ordinary pneumonia, or of correlated inflammatory neuropathies. They are frequently accompanied by vegetative endocarditis (one-third of all the cases), by fibrinous, or fibrino-purulent, pericarditis, or by pleurisy.

With regard to the meninges, we find an exudate—yellowish, viscous, fibrinous, and very richly abounding in micrococci—most conspicuous on the cerebral convexity, and more especially along the course of the vessels. It is also present on the basal surface, and on both aspects of the cerebellum; but there is, as a rule, less coherent and compact than on the convexity. The exudate is incorporated with the meshwork of the pia mater; which latter structure, on the other hand, is easily detachable from the surface of the brain. The cerebral ventricles are specially affected; the intraventricular liquid is more abundant than in the normal state, and contains small clots of fibrin held in suspension. The choroid plexus forms a continuous fibrino-purulent mass. The spinal meninges are involved in the majority of cases. Netter says, in one-third; but the systematic statistics of autopsies of the spine have displayed the existence of a much higher proportion. It is even probable that no pneu-

mococcal meningitis develops without involving in its attack the whole of the cerebro-spinal axis. It is true that the lesions display varying degrees of intensity, according to the stage of development and the locality; they are specially pronounced at the level of the cervical and lumbar enlargements; they are present in those situations under the aspect of a continuous fibrino-purulent stratum; at least, on the posterior aspect of the pia mater—the anterior portions of this membrane are relatively spared by the disease—and, besides, they display along the vessels milky streaks, or yellowish non-coherent bands; and again, in other cases there may be but a simple vascular injection—hyperæmia without exudation.

To these histological lesions correspond *modifications of the cerebro-spinal fluid,* which are revealed by lumbar puncture:—

(1) *In the initial period,* this liquid undergoes but slight modifications: (*a*) its appearance is often limpid, or but slightly turbid (*b*) the increase of tension may be slight or even nil; (*c*) microbes may be undiscoverable by direct examination, or even by culture; (*d*) the leucocytic reaction may be absent, or appear only at wide intervals (polynuclear lymphocytosis, or of the intermediary formula).

(2) *In the period of full development,* lumbar puncture brings off a liquid at high or medium tension, turbid or purulent, of a pale yellow or bluish tint, and variable consistence—sometimes viscid. This fluid is highly albuminous, contains fibrin in abundance, and rapidly presents a copious coagulum; this is sometimes even completely formed within an interval of ten or fifteen minutes after the puncture. Microscopic examination, made before, or better after, centrifugalisation gives results which are nearly constant as regards bacteriology, but very variable in respect to cytology. Bacteriological examination reveals the presence of pneumococci in variable quantity; usually, however, in great numbers; free, or enclosed in leucocytes; the majority presenting typical characteristics, and some under the aspect of degenerate forms, more or less refractory to Gram's stain. From the cytological point of view, the results are much more variable; sometimes—indeed in the more usual type of case—we find readily presenting itself in evidence a typical formula of polynucleosis (polynuclear cells, both intact and degenerate); sometimes, again, the polynuclear cells are much less numerous, and centrifugalisation is indispensable in order that the examination of the clot should reveal the formula of classic polynucleosis (A. Mery and Partunier). Finally, in other cases, leucocytes are completely absent; and we find ourselves

in presence of this *paradoxical* formula *abundant pneumococci, sometimes in pure culture, without any associated cytological elements.* Instances of the occurrence of cases in which the cerebro-spinal fluid of pneumococcal meningitis is either void of, or extremely poor in, cellular structures are not rare (Menetrier and Aubertin, Achard and Ramond, Guillemot and Ribadeau-Dumas, Castaigne and Dobré, Ch. Lesieur Froment and Garin, Guillain and Cl. Vincent, etc.). They have elicited variously divergent pathogenic interpretations. According to some authors, the cause lies with the chemotaxis. When the pneumococcus is but slightly virulent, the organism is but lazy in defending itself; hence the leucocytic afflux is either nil, or small in quantity. But when the microbe is highly virulent, its secretions repel the leucocytes and extinguish their vitality; hence paralysis of the cellular defence, and extreme poverty of the liquid in leucocytes. According to Professor Widal, however, the mechanism is wholly different; in the spinal canal itself, there occurs a *precipitation*—a *retraction*—of the fibrin comparable to that which takes place *in vitro;* and the coagulum so formed envelopes the leucocytes which, by virtue of the fact, disappear almost completely from the surrounding liquid. The results of a puncture made in the case of one of our patients go to support the idea of the pathogenesis which is maintained by Professor Widal. On account of an operative incident, the procedure took place in two sittings at an interval of three hours. In both portions of the fluid evacuated, an *abundant supply of pneumococci* was evident; but, while the first portion was *extremely fibrinous,* and *extremely rich in polynuclear cells* which were *nearly all involved in the coagulum,* the second portion was almost *completely free from fibrin and leucocytes.* How explain these differences, after an interval so brief? We can hardly admit that it was merely due to a simple chemotactic variation. And if this explanation appears applicable to the case of the leucocytes, it surely cannot be applied to the fibrin. Thus it is more plausible to admit that unknown factors (involved in the operative traumatism, effusion of blood, etc.) created conditions favorable to precipitation and retraction of fibrin. This is, at least, a plausible hypothesis—regarding an interesting question which is still a disputed one.

With regard to the cytological point of view, we are now able, in bringing our own personal observations into juxtaposition with those which had been previously published, to present in the following table the several leucocytic formulæ of pneumococcal meningitis:—

(*a*) Polynucleosis.

(*b*) Lymphocytosis: initial, transitory, and rapidly followed by polynucleosis (cases observed by Triboulet, Ribadeau-Dumas, Menard, and ourselves);

(*c*) Absence of leucocytic reaction.

IV.—Differential Diagnosis.

Meningitis co-existing with pneumonia is liable to be confounded with one of various pathological states. The following are some examples:—

(*a*) Tuberculous conditions (caseous pneumonia, for instance), complicated with the final granulation process.

(*b*) Pneumonia complicated with cerebral phenomena attributable to hæmorrhage, cerebral or meningeal; to cerebral embolism, cerebral abscess, thrombosis of the sinuses, etc.

Clinical examination will here assist in forming the diagnosis; but, in order to eliminate meningitis with certainty it is necessary to have recourse to the lumbar puncture. The same observation, and same precept, must be regarded when distinguishing pneumococcal meningitis *from every other variety of active meningitis* (here including even tubercular meningitis). Clinical observation furnishes us with presumption only; bacteriological examination of the cerebro-spinal fluid leads us to certainty. This includes the following series of operations:—

The liquid derived from the lumbar puncture should be divided into three portions—one destined for direct examination, one for cultures, and the third for inoculations. All must be received aseptically in sterilized tubes.

(1) *Direct Examination on Slides.*—This may be applied in case of the total mass of fluid, or to the deposit obtained by centrifugalisation. Examination of the original mass of fluid suffices, as a rule, for bacteriological diagnosis; examination of the deposit after centrifugalisation is indispensable to determination of the cytological formula. Centrifugalisation should be carried out some minutes after the puncture, for in liquids in which pneumococci are present a fibrinous coagulum is very rapidly formed, which involves in its meshes nearly all the leucocytes If the centrifugalisation must be postponed, the liquid may be defibrinated at once by placing it in a receiver containing glass beads. In the positive cases, direct examination will reveal: (1) Diplococci in lanceolate arrangement, encapsuled, and taking the Gram stain; (2) a cytological formula of polynucleosis (70-90 per cent. of polynuclear cells). We may

have different results in all of the early phases of the meningeal process: (*a*) Absence of microbes; (*b*) lymphocytosis. This is, however, soon replaced by polynucleosis.

(2) *Cultures.*—These may be carried out with specimens of the general mass of liquid (when the germs are numerous) or of the deposit (when they are few in number), on the various media usually employed; and also, in addition, on *serum-broth* and *ascitic jelly* when available. In case of the pneumococcus. the culture on the latter (in form of dewdrops) should be characteristic of this microbe. In the cases which prove difficult of identification we may utilise all the various other complementary methods of culture; these may be adapted to the characters of the germ which were made manifest in the previous cultures.

N.B.—In preparing for the broth culture it is well to dilute the cerebro-spinal fluid with large quantities of the medium (to a tenth, or so).

(3) *Inoculation.*—This may be practised subcutaneously on the guinea-pig (¼-½cc.) or the rabbit (2cc.). When dealing with the pneumococcus, death by septicæmia takes place after an interval of twenty-four to seventy-two hours. The microbe multiplies in the blood. We can always identify it absolutely by appropriate cultures made with blood taken from the heart.

N.B.—When the germs are proportionally few, the inoculations should be practised with portions of the deposit diluted in physiological serum.

(4) The preceding modes of examination should be finally supplemented by application of the *precipitin* reaction of H. Vincent; this gives a negative result in cases of pneumococcal meningitis.

V.—Prognosis.

The prognosis of a case of pneumococcal meningitis cannot be based upon clinical evidence alone. In fact, if the acute and hyper-acute cases are almost surely fatal, we have seen apparently very grave cases recover—which seemed, indeed, at first to be destined to the same fatal evolution. It is quite true that in some of these, in absence of the lumbar puncture, some doubt may be cast on the legitimacy of the diagnosis. The prognosis should be founded on a double basis—that of the clinical condition, and that of the bacteriological examination of the cerebro-spinal fluid. When the latter displays abundant microbic proliferation, the fatal result is assured. And the only cases which would appear to be curable, whatever be the apparent

gravity of the clinical tableau, are those in which the meningitis is of the purely circulatory, or but very slightly exudative, type; when the anatomical process is still compatible with recovery (Grasset). These cases correspond to a proliferation of the pneumococcus of slight relative proportion—so slight that Belfanti, not being able to demonstrate its presence, incriminated the toxins of that microbe—and such that special artifices are necessary to discover it at the time.

VI.—Treatment.

This may also be very deceptive at the time of the full development of the clinical conditions. The usual sedatives may be employed to allay the symptoms of excitement. The use of the warm bath at 40 deg. (104 deg. F.), every three hours, and the lumbar puncture every day, continue to form the principal basis of the treatment. We must still wish for the discovery of a specific serum of appropriate efficiency.

B. *Parapneumonic Meningeal Pneumococcosis.*—There are cases in which the passage of the pneumococcus into the subarachnoid space does not result in the production of a true meningitis—in the anatomical and clinical sense of this term. The pneumococcus has indeed penetrated, as the culture of the same bears witness, into the cerebro-spinal fluid; but its proliferation takes place in extremely scant proportion—so scanty that direct examinations, even when carried out with the aid of centrifugalisation, do not succeed in placing it in evidence; and even culture itself sometimes proves powerless to reveal its presence, unless we have recourse to special artifices. In those cases, with the exception of a certain degree of hypertension, the cerebro-spinal fluid retains its normal characteristics; the cellular reactions are usually very slight—and, in the majority of instances, are due to a distinct lmphocytosis (R. Voisin, Lafforgue)—or even completely absent (Ch. Lesieur, Froment and Garin). From the clinical point of view, facts of this order have been included under the title of "meningism"; with rare exceptions, indeed, the meningeal symptoms are greatly reduced in number and importance. In one of our own cases they consisted merely of a violent headache, a slight degree of nuchal pain, a Kernig's sign almost obliterated and reduced to a spontaneous flexion of the leg on the thigh when the patient passed from the recumbent to the sitting position. Nevertheless, it is not rare to find the participation of the meninges in the infective process evidenced from the outset by the presence of two

symptoms which are sufficiently rare in the pneumonia of the adult—repeated vomitings, and pain on pressure of the eye-balls, accompanied by photophobia. The pathogeny of those meningeal conditions appears to be superposable on that of meningitis, properly so-called.

The diagnosis of these cases is difficult enough. In order to establish its accuracy, it must not be based on the semeiological nuances above referred to; the lumbar puncture must constitute the sole decisive criterion. It is but in exceptional cases that the pneumococci will be revealed by direct examination, on slides, of the centrifugalised liquid; the germs being very few in number, it is *only by culture and inoculation* that we can be able to place them in evidence. Nevertheless, in order that the culture should be more surely positive, it will be useful to have recourse to certain artifices, of which the importance has been demonstrated by one of our own cases: (1) Large quantities of the cerebro-spinal fluid should be used for cultures (in case of one of our patients, 5 cc. remained sterile, while the culture gave a positive result with 30 cc.); (2) the cerebro-spinal fluid should be diluted with a considerable volume of the culture medium used (dilution in proportion of 1:10 for each examination). MM. Lannois, Lesieur and Gauthier have, indeed, shown that the cerebro-spinal fluid is a medium which often proves very unfavorable to the successful culture of microbes; thus there is, accordingly, an advantage gained by diluting it, so as to avoid its hindering influence, as a drag upon the process of evolution in presence of culture. It is indeed probable that cases of this type—which are still pretty rare in medical literature—will not fail to become more numerous if we regulate our procedure systematically according to the method described.

The immediate prognosis appears to be favorable. Is this also the case with regard to the remote prognosis? These meningeal episodes, even when apparently transitory and curable, constitute, in actual fact, a thorn and a gnawing torment for the future.

The treatment of cases of pneumonia complicated with meningism may be allowed to depend mainly on balneotherapy at high temperature. The desirability of practising lumbar punctures systematically is much more questionable; these find their principal indication in the persistence of the meningeal syndrome. And here we may appropriately recall the fact that MM. Lesieur, Froment and Garin have maintained by the verification of the existence of a masked meningeal pneumococcosis

a new pathogeny of pneumonic hemiplegia. Their observation, taken in addition to that of Mouisset and Lyonnet, is of the most suggestive type.

C. *Pneumococcal Meningitis without Pneumonia.*—The developments associated with para-pneumonic or meta-pneumonic meningitis seem to promise us to become extremely extended in connection with meningitis without pneumonia. Sometimes it is but a rigorously isolated manifestation of the infection; in other cases it succeeds to some other pneumococcal determination—endocarditis (Jaccoud), otitis (Leyden, Senger, Netter), coryza (Raymond), uterine infection (Caussade and Logre), etc. Whether primary or associated, it recognizes the same pathogeny as parapneumonic meningitis; while it also displays the same clinical forms, determines the same lesions, and conforms to the same rules of diagnosis and of treatment. The labors of Scherb have demonstrated the gravity of the diagnosis in cases of the acute type. The feature which has long constituted the special interest of this form of disease is the mere fact of its existence—the fact, which has been prominently placed in evidence by Netter, that the pneumococcus is susceptible of exclusive localization on the meninges, without any other preliminary visceral determination. Beyond this point, which is firmly established at present, we can but repeat, in connection with this subject, the considerations which have already been enunciated when considering the subject of meningitis with pneumonia.—*The Medical Press.*

Editorials.

HEALTH DISTRICTS OF ONTARIO

It is fairly well known to the public and to the profession that the Hon. Mr. Hanna in introducing his new "Health Act" last Session divided the Province into seven medical districts and appointed an officer for each district. These officers were called to Toronto early in August to get practical instruction as to the nature of the new Act, and in general sanitary measures, chiefly from Drs. McCullough, Amyot, Bell and Helen MacMurchy. Three of these men had been members of the Provincial Board of Health for one year and a half, and had an intimate knowledge of the Health Act which they helped to frame. The association of these three men, Dr. Bentley, of Sarnia, Dr. Clinton, of Belleville, and Dr. Maloney, of Cornwall, with the remaining four officers, helped materially to give the latter full information as to the Act in all its aspects.

Instruction was given in sanitary chemistry, bacteriology, general hygiene, sanitary engineering and contagious diseases. In addition they did some practical work in investigating sewage problems and epidemics in their various districts. They went to Gravenhurst for a few days' study of the treatment of tuberculous patients and went also to London, Ont., on the invitation of Hon. Adam Beck to inspect the sanitarium he is especially interested in. They also attended the meetings of the Canadian Medical Health Association, the American Association and the International Congress of Hygiene in Washington. They gave up their work in Toronto, and went to the

districts about the middle of November. Each one took with him an admirable outfit consisting of a kodak, a microscope and all the various articles necessary for making all sorts of investigations, analyses, etc. We think we are justified in saying that there is no band of health officers in the whole world who are better equipped and better qualified for the work they will be called on to perform.

It is expected that Dr. D. B. Bentley, of Sarnia, will have his headquarters in London; Dr. T. J. McNally, of Owen Sound, in Harriston; Dr. George Clinton, of Belleville, in Peterborough; Dr. P. J. Maloney, of Cornwall, in Kingston; Dr. D. A. McClenahan, formerly of Waterdown, in Hamilton; while the two officers of the Northern Ontario will have headquarters in their former places of residence —Dr. C. E. George in North Bay, and Dr. R. E. Wodehouse in Fort William.

THE TORONTO INDUSTRIAL FARM

The people of the Province of Ontario have a fairly intimate knowledge of the magnificent work that is being done at Hon. Mr. Hanna's "Prison Farm" at Guelph. It is probably not so generally known that similar work is being done at the "Toronto Industrial Farm." This farm is situated on Yonge Street about twelve miles north of Toronto and contains 270 acres in a fair rolling country where (according to the *Mail and Empire*) "there is sweetness and freshness and quiet, in place of the stench and noise of jail life."

The institution was organized in the first place to relieve the congestion of the jail. The prisoners on

the farm are chiefly confirmed drunkards, vagrants and petty thieves. They are given an opportunity to recover their lost strength of character; they are encouraged to forsake their evil ways; and leave the farm with a good chance of earning an honest living in the future.

So far as this farm is concerned the words prison, jail, and prisoners are omitted. It is termed the Industrial Farm, and those working on it are called the "boys." There are no guards: the boys are free from irksome restraints. They are placed on their honor to observe their parole, and up to the present time we understand that only one of the "boys" has broken his word. The institution has been in operation since last March. Up to the present time no substantial buildings have been erected, but there are now about 70 men engaged in "mixed farming." The results have been considered very satisfactory to all who have taken the trouble to investigate.

ACUTE ANTERIOR POLIOMYELITIS

Nine years ago a well known author (A. A. Stevens) described infantile paralysis as an acute disease, occurring almost exclusively in young children, characterized anatomically by a destruction of the ganglion cells in the anterior grey horns of the cord. "The sudden onset, the absence of any known exciting cause, and the fact that it has occurred endemically suggest an infectious origin." There is probably no doubt now, among those who have carefully investigated, that the disease is communicable. That is certainly the fixed opinion of the Chief Health Officer of Ontario, and all his inspectors.

Dr. Helen MacMurchy has written a very interesting article, published in MacLean's Magazine, November, 1912. We learn from it that the first well-recognized epidemic of acute anterior poliomyelitis was in Sweden in 1881. The first epidemic in England was in 1897. The first epidemics in the United States were in Massachusetts and Vermont in 1894. The increase of the disease in the United States and Canada during recent years has been great with very serious results. Flexner thinks there have been at least 20,000 cases in the United States with 10,000 to 15,000 patients disabled. There were about 350 cases in Ontario in 1910 and about 300 in the other Provinces of Canada.

We are told in the same article that 1910 was in a terrible sense a "wonder year" for epidemic poliomyelitis. In that year epidemics occurred in Britain, Canada, the United States, Germany, Austria, Switzerland, Belgium and Denmark. Dr. MacMurchy speaks as follows as to damage inflicted. Of those attacked 10 to 20 per cent. do not survive. About 80 per cent. suffer from paralysis, and of this 80 per cent. only about one in four recovers perfectly. All the rest are more or less disabled. In Ontario, in September, 50 per cent. of the cases were fatal.

CONTACT INFECTION

In the bulletin for October, issued by the Toronto Board of Health, we find some comments on the Washington Congress of Hygiene from which we select the following:

The discussions on some of the problems showed a general acceptance of ideas which would have aroused

strong opposition a few years ago. For instance, Dr. Chapin, of Providence, Rhode Island, gave a paper on "Contact Infection," in which he said that practically all infectious diseases were conveyed from one person to another by the germs of mouth and nose secretions being carried directly from the infected person to others. Exceptions were water or milk borne diseases where the excretions are conveyed from one infected person to another in this way, or where biting insects convey the virus. He stated that dust, clothing, etc., were, from the practical standpoint, not responsible for carrying disease germs from one person to another at all.

He stated, for instance, that it has never been shown that there is more scarlet fever or diphtheria in the vicinity of isolation hospitals than elsewhere, and quoted numerous instances where in hospitals smallpox, scarlet fever, diphtheria, etc., had been placed in adjacent beds, without cross-infection taking place. In other words, this could be done in any hospital, provided you could trust your attending nurses, physicians, etc., to see that the germs which may possibly have got on their hands while attending one patient were not transferred directly to another patient. We know that in Toronto there is no more scarlet fever or diphtheria close to our isolation hospital than there is anywhere else; in fact, any one who has worked with disease-producing organisms knows that you can handle people with any disease and not contract that disease if you prevent them from coughing or spraying their mouth secretions in your face, and if you wash your hands after handling the patient.

ITEMS

A new hospital at Orangeville, Ont., was formally opened, October 1st.

A new hospital is being built in Cobourg, Ont., to contain thirty beds.

The next meeting of the American Hospital Association will be held in Boston in September, 1913.

The next meeting of the American Medico-Psychological Association will be held at Niagara Falls in June, 1913.

A new hospital is being built at Moose Jaw, Sask., at a cost of three hundred thousand dollars.

A new smallpox hospital for Ottawa, is being built on Porter's Island to contain sixty beds.

Typhoid fever has been prevalent lately in many parts of the North-West, but especially in Brandon, Edmonton, Calgary, and Moose Jaw.

A new wing is being added to the hospital at Niagara Falls, to be known as the Susan Thompson Memorial Wing, at a cost of about thirty thousand dollars, the funds being provided through a legacy left by the late Susan Thompson.

Dr. W. T. Hill, the new Director of the Institute of Public Health, London, Ont., has instituted a campaign of instruction in public health in the rural districts in western Ontario.

The American Surgical Association has appointed a committee, consisting of Drs. William L. Estes, South Bethlehem, Pa.; Thomas W. Huntingdon, San Francisco, California; John B. Walker, New York City; Edward Martin, Philadelphia, and John B. Roberts, Chairman, 313 S. 17th Street, Philadelphia, to report on the operative and non-operative treatment of closed and open fractures of the long bones and the value of radiography in the study of these injuries. Surgeons, who have published papers relating to this subject within the last ten years, will confer a favor by sending two reprints to the Chairman of the Committee. If no reprints are available, the titles and places of their publication are desired.

JOHN B. ROBERTS, *Chairman.*
313 S. 17th Street, Philadelphia.

Reports of Societies

CONFERENCE ON THE FEEBLE-MINDED

A very important conference was held in the City Hall, Toronto, November 8th, respecting the feeble-minded children of Ontario. Nearly two hundred delegates were registered from more than a score of municipalities, representing the municipal governing bodies, the school boards and the medical profession and charities executives from end to end of the Province.

Facing originally toward the building of institutions for the feeble-minded during that period while they may profit by special educative courses by the municipalities in groups, as is done in Philadelphia, and moved upon the conference by Controller McCarthy, who acted as chairman, this resolution was amended to provide for the care of these subjects in institutions to be built and operated by the province, but supported on a pro rata of inmates by the various municipalities.

After the meeting had been opened and chairman and secretary chosen, Controller McCarthy opened the subject, explaining how the conference had come to be called, and urging upon the conference the immediate need of action.

Dr. Helen MacMurchy laid the question before the meeting in an address outlining the problem of the feeble-minded, explaining the deplorable condition existing at present, the potentiality for public harm and private suffering and wrong in this class of the community and the dangers immediate and remote in matter of time and effect.

Commissioner J. E. Starr of the juvenile court spoke of his experience upon that bench and urged the stirring need for action, describing terrible conditions as shown in the cases which have come before him since the creation of that court a year ago. President Scott, of the Children's Aid Society at Ottawa; Miss Brooking, Superintendent of the Alexandra Industrial School for Girls, and J. P. Downey, Superintendent of the Hospital for the Feeble-minded at Orillia, spoke out of their own immediate experience in their daily work. Their addresses were depressing recountings of pitiful and sordid tragedies which grouped to form a great and impending menace to the social and economic life of the province.

Dr. Chas. J. Hodgetts, chief medical adviser to the Conservation Commission of Canada, delivered an address, in which he pointed out the crying need for the prevention of the marriage of those who could be shown to be feeble-minded.

Hon. W. J. Hanna, Provincial Secretary, said: I have nothing to say beyond this, that the matter has been the subject of more or less discussion between a deputation from the city, headed by your chairman, Controller McCarthy, and the Government. The Government has given this matter some consideration, and should the municipalities decide to take action either individually, or in groups, I think I can say that the municipalities will not be disappointed in the part the Government will take.

The following resolution was carried:—Moved by Dr. Charles J. Hodgetts, seconded by Superintendent Scott, of Ottawa: "That in the opinion of this conference the issuing of marriage licenses should be confined to a municipal officer, for instance, the municipal clerk. That in the opinion of this conference it is desirable that the Marriage Act should be amended in such a manner as will prevent the marriage of a mental defective. That in the event of the permanent organization of this conference the permanent executive be instructed to press on the government the desirability of introducing such legislation."

Moved by Alderman Perney, of Ottawa, and seconded by Alderman Dr. Davies, of Hamilton: "That the legislature be memorialized to provide institutions for the care of the feeble-minded in Ontario, and that municipalities of the Province be required to pay for the maintenance of their wards up to the age of 21 years if necessary, after which, if unable to take care of themselves, they shall become wards of the government." Carried.

A permanent executive was then appointed with instructions to move for the carrying out of the propaganda outlined in the foregoing resolutions and to urge the taking of a census of the feeble-minded in the province, which, it was pointed out, could be done authoritatively and comprehensively by the co-operation of the various boards of medical health, whose expenses must be borne by the municipalities under the act. Dr. Helen MacMurchy told of the promise of New York officials to act as a training school for the special line of work which would be required in the new institutions.

The executive. President, Controller J. O. McCarthy; First Vice-President, Mrs. Torrington, President of the

National Council of Women; Second Vice-President, Alderman Perney, Ottawa; Third Vice-President, Alderman Davies, Hamilton; Fourth Vice-President, Mayor Thorpe, Guelph; Secretary, Edwin Dickie, Toronto, with the following as executive committee: Commissioner J. E. Starr, Toronto; Dr. Helen MacMurchy, Toronto; Miss Brooking, Toronto; Rev. John Inkster, London; C. C. Cole, Niagara Falls; Mayor Hartman, Brantford; Dr. Charters, Chatham; Col. Farewell, Whitby; Mayor Hoag, Kingston; Supt. Scott, Ottawa; Public School Inspectors Huff, Meaford; Mowatt, Peterboro; and Chapman, Toronto, with power to add to their numbers. To this was joined the resolution that the nucleus of the members of the Association consist of all members registered here, together with all wardens of counties and all mayors of towns and cities in Ontario.

Obituary

WILLIAM McLEOD, M.D.

Dr. W. McLeod, of Saskatoon, was thrown from his horse and instantly killed, September 20th.

JOHN G. COLLVER, M.D.

Dr. Collver, of Waterford, Ont., died September 2nd, aged 85. He graduated M.D., from the University of Buffalo in 1854. He practised in Waterford about fifty years.

WILLIAM REAR, M.D.

Dr. Rear, for many years a practitioner in Saginaw, Mich., and for a time a resident in Toronto, and for the last three years a resident in British Columbia, died in Vancouver, September 29th, aged 73.

WILLIAM JOHN ROE, M.D.

Dr. W. J. Roe, who practised for more than forty years in Georgetown, died November 1st, aged 71. He received his medical education largely in Dublin, Ireland, but partly at the old "Rolph's School" in Toronto.

J. J. ANDERSON, M.D.

Dr. Anderson, of Brandon, Man., died September 21st, aged 52. He was a native of Ontario, but went to Manitoba in early boyhood. He was for some time Superintendent of the Hospital for Insane in Brandon, but resigned about two years ago.

JOHN THOMAS DUNCAN, M.B.

Dr. J. T. Duncan, of Toronto, was in rather poor health for some time. About six months ago he retired from practice and went to California. Favorable reports came, and his friends had strong hopes of recovery in the near future. Under such circumstances the news of his sudden death at Monrovia, California, November 4th, caused great surprise and much sorrow.

He graduated M.B., from the University of Toronto in 1882, and for some years was engaged in general practice in Toronto. About fifteen years ago he went to England for post-graduate work and after his return specialized in diseases of the eye and ear. He possessed superior ability, and was greatly respected and highly esteemed by all who knew him. The remains were brought to Toronto, and buried in Mount Pleasant Cemetery, November 11th.

Book Reviews

A System of Treatment by many writers: Edited by Arthur Latham, M.A., M.D., Oxon; F.R.C.P., London, Physician and Lecturer on Medicine, St. George's Hospital, and T. Crisp, English Surgeon and Lecturer on Surgery, St. George's Hospital. Toronto: The Macmillan Company of Canada.

This "System of Treatment" comprises four volumes, all of which have been issued simultaneously. We may say in the first place that, *taking it all in all*, it is a remarkably fine production, and, as a work of reference for both the specialist and the general practitioner (but especially for the latter), it will be found invaluable. The aim of the editors has been to provide a series of practical articles in as concise a form as possible, describing modern methods of treating all diseases.

We must confess that we have a certain prejudice against this sort of publication, and commenced an examination of the different volumes without much enthusiasm. We expected, of course, to find some overlapping and serious differences of opinions, amounting in some cases to direct contradictions. We certainly do find the overlapping and differences of opinion; but we must say that we think the overlapping is not harmful, and the differences of opinion are quite legitimate.

We have an idea that the editors have done a *lot of editing*. Otherwise we cannot account for the general clearness of style, conciseness, and level-headedness, which may be discovered everywhere. Where there are evidences of asymmetry there are indications of rare methods in such irregularity which in a way add to the value of the writings for him who really wishes to get all the best possible opinions, and legitimate differences of opinions, without any admixture of rubbish. We shall speak more in detail with reference to the different volumes in a future issue.

The Blood of the Fathers. A play in four acts. By G. Frank Lydston. Chicago: The Riverton Press, 1912.

Dr. Lydston has written a play which may never be produced, because it has a great moral, and people like to be amused not taught. Nevertheless there are bits of dialogue

which are equal to Bernard Shaw, and there is a plot that puts to shame most of the popular plays. The interest, however, for the physician is not in the dramatic art, and that is more than ordinary, but in the problem of eugenics, which he finds between the lines. While not entirely agreeing with the author, one can not help pondering over the implied solution to a question he has to face almost every day of his professional life.

The Treatment of Diseases of the Skin. By W. Knowsley Sibley, M.A., M.D., B.C., Camb.; M.R.C.P., Lond.; M.R.C.S., Eng., Physician to St. John's Hospital for Diseases of the Skin, London. London: Edward Arnold, 41-43 Maddox Street West. 1912.

This book forms a convenient reference hand-book on a subject, which too often is more or less neglected. The treatment of diseases of the skin means something more than the exhibition of sulphur ointment or calamine lotion. Of recent years the newer physical methods of treatment have come to occupy a prominent place in the dermatologist's armamentarium, so that many former intractable conditions readily respond to their use. The new agents such as radium, ionization, Biers' hyperæmia and vaccines are all given an important place in this treatise.

The subject matter is arranged alphabetically. One most convenient part of the book is Part III., which contains some 140 prescriptions, and will be found most useful and suggestive. For the general practitioner for whom it is primarily intended we believe this book will be of considerable assistance and service.

House-Flies and How They Spread Disease. By C. G. Hewitt, D.Sc., Dominion Entomologist, Ottawa, Canada. London: Cambridge University Press, Fetter Lane, E.C.

This excellent little book, written by a Canadian is full of thought for the sanitarium. Dr. Hewitt has made a long and careful study of this winged pest, which greets us almost at the moment of our birth and awaits us to our latest hour. Every physician should read it.

The Practitioner's Visiting List for 1913. An invaluable pocket-sized book containing memoranda and data important for every physician, and ruled blanks for recording every detail of practice. The Weekly, Monthly and 30-Patient Perpetual contain 32 pages of data and 160 pages of classified blanks. The 60-Patient Perpetual consists of 256 pages of blanks alone. Each in one wallet-shaped book, bound in flexible leather, with flap and pocket, pencil with rubber, and calendar for two years. Price by mail, postpaid, to any address, $1.25. Thumb-letter index, 25 cents extra. Descriptive circular showing the several styles sent on request. Philadelphia and New York: Lea and Febiger, publishers.

When once a doctor begins to use this visiting list, he continues, for there is nothing else so handy and so easy. It serves him for an index constantly, and with the card system for his accounts, he needs no other book.

A Text-book on the Practice of Gynæcology. For Practitioners and Students. By W. Easterly Ashton, M.D., LL.D., Professor of Gynæcology in the Medico-Chirurgical College of Philadelphia. Fifth edition, thoroughly revised. Octavo of 1,100 pages, with 1,050 original line drawings. Philadelphia and London: W. B. Saunders Company, 1912. Cloth, $6.50, net; Half Morocco, $8.00, net.

Five editions and five reprints of Dr. Ashton's Gynæcology have been issued since the book first appeared in 1905. This fact alone would prove that it has been found useful, both by students and practitioners. It has long been a favorite text-book in this country, and though it has been enlarged as rapidly as advances in the work of gynæcologists demanded, still it is not over-weighted, and every advantage of illustration and arrangement is placed at the service of the reader.

In this latest edition the use of the Röntgen Rays is carefully discussed, mention being made of their place in the treatment of obstinate menorrhagia and metrorrhagia.

Loeb's investigations on dermoid cysts, showing that dermoid cysts of the ovary are derived from parthenogenetically developed ova, the functions of "hormones," the most recent advances in surgical technique are all considered and this adds

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that vast army of those who call on their Doctor, complaining of the various well-known symptoms of caffeine-poisoning, frequently cause the Doctor no end of annoyance, unless he insist, at the start, that the patient quit coffee and tea.

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considerably to the value of the book. There are also hints of a practical and simple nature, which the physician in actual practice will greatly appreciate, on almost every page. It is a good plan for the general practitioner to read straight through a book on gynæcology every two or three years, and Dr. Ashton's work is well suited for such a reading. We heartily commend it to our readers.

The Prescriber. A Monthly Journal dealing with Therapeutics, Pharmacology and the Newer Remedies. Edited by Thos. Stephenson, F.R.S.E., F.C.S., Examiner to the Pharmaceutical Society of Great Britain. Volume V., January to December, 1911. Edinburgh: The Prescriber Offices, 137 George Street.

A journal that is always full of thought, and one of great use to a medical man.

Mayo Clinic Papers for 1911, collected by the Staff of St. Mary's Hospital. Octavo of 601 pages with 250 illustrations. Cloth, $5.50, net. Philadelphia: W. B. Saunders Company; Toronto: J. F. Hartz Company.

These excellent papers embodying the work of the Mayo Clinic, as it is well and popularly known, includes the work done at the St. Mary's Hospital, Rochester, Minnesota, where these distinguished surgeons and their assistants form the staff.

It is a rare treat to read the majority of the articles in this volume, and it is very difficult to pick any one or two articles to particularize because they are all of such excellent value. Each is on a particular subject read before some distinguished body by one or more members of the staff, and embraces the work of the hospital in that particular line. Where an experience of four or five thousand cases can be utilized, and the operators are surgeons of repute, there can be no question as to the value of the results, and such is the case in this clinic.

In the articles on œsophageal obstructions, disorders of the stomach and duodenum, ulcer of the stomach and duodenum and cancer of the stomach, the research and clinical work are most excellent; in the one referring to ulcer of the stomach, where one thousand operations had been done, and the results compiled, it is easy to see these results must be of the greatest value to the profession at large.

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Then again, the description of the surgical pathology of the prostate is well worth the price of the whole volume. It most completely reviews the pathology of the prostate and brings it up to date. It refers to the frequent neglect that the prostate receives, particularly in cases in which the main symptoms do not point to that gland as the prominent source of the condition complained of; the concluding sentence of this article, "a rectal examination should be the routine procedure with all males presenting themselves for diagnosis of obscure abdominal as well as genito-urinary troubles," should impress us all.

This series of clinics, of which the one under review is the latest issued, should be on the shelves of every practitioner if for no other purpose than reference and statistics. The amount of work done in the Rochester clinic is certainly enormous, and the results warrant the highest reputation that these surgeons receive.

The illustrations and typography are of the best, and the publishers are to be congratulated on so excellent a work.

Surgical Operations. A Handbook for Students and Practitioners. By Prof. Freidrich Pels-Leusden, Chief Surgeon to the University Surgical Clinic and Chief of the University Surgical Polyclinic in the Royal Charity Hospital of Berlin. Only authorized English translation. By Faxton E. Gardner, M.D., New York. With six hundred and sixty-eight illustrations. New York: Rebman Company; and Toronto: J. F. Hartz Company.

It is a great pleasure to review a volume such as this is. It is a book that the general practitioner needs. The description of the necessities and technique of surgical practice is so thorough that it will be a great aid in his general practice and be a ready and reliable reference, complete and concise.

While it is called "Surgical Operations," it deals with the matter from asepsis to the recovery of the patient. The description of the numerous sutures, dressings, preparation of the patient, anæsthesia and technique are all dealt with in a way that is very convincing. The newer operations as to "treatment of wounds of the blood-vessels" are beautifully illustrated and the technique made very clear. All operations are described, and, wherever necessary, several illustrations are used

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4. *The Diseases of the Oral Cavities,* one volume, by Zinsser, M.D. 51 colored illustrations (four-color process) and 22 (one of which is colored) illustrations of the teeth, spirochætæ and trepenomata.

BOOKS RECEIVED

A Text-Book of Obstetrics. By Barton Cooke Hirst, Professor of Obstetrics, University of Pennsylvania. Seventh edition. Philadelphia and London: W. B. Saunders Company.

The Mechanism of Life. By Dr. Stephane Leduc, Professeur a l'ecole de Medecine de Nantes. Translated by W. Deane Butcher, formerly President of the Röntgen Society, and of the Electro-Therapeutical Section of the Royal Society of Medicine. New York: Rebman Company, 1123 Broadway.

"remember it should be moist and it should be hot" was the final dictum of a well known Neurologist in referring to the treatment of Neuritis.

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False Modesty. By E. B. Lowry, M.D. Chicago: Forbes and Company, 1912.

Guide to Midwifery. By David Berry Hart, M.D., F.R.C.P.E., Lecturer on Midwifery, School of the Royal Colleges, Edinburgh. Formerly Obstetric Physician, Royal Maternity and Simpson Memorial Hospital, Edinburgh; formerly Gynæcologist to the Royal Infirmary, Edinburgh. With four illustrations in color and 268 diagrams. New York: Rebman Company, 1123 Broadway.

Commission of Conservation, Canada. Honorable Clifford Sifton, Chairman; James White, *Secretary.* Second annual Report, including a report of the proceedings of the second annual meeting held at Quebec, January 17-20, 1911, and of the Dominion Public Health Conference held at Ottawa, October 12-13, 1910. Montreal: John Lovell & Son, Limited, 1911.

Atlas of Microscopic Diagnosis in Gynæcology. With preface and explanatory text by Dr. Rudolf Jolly, Priv. Doc. Chief Physician of the Gynæcologic Clinic University of Berlin. Only authorized English translation by P. W. Shedd, M.D., New York. With 52 lithographs in color and 2 textual figures. London: Rebman, Limited, 129 Shaftsbury Avenue.

Pathology and Treatment of Diseases of Women. Fourth edition, rewritten by A. Martin, Professor und Direktor, and Ph.Jung, Professor und Oberarzt, der Universitats-Frauenklinik in Greifswald. Only authorized English translation, written and edited by Henry Schmitz, M.D., Professor of Gynæcology, Chicago College of Medicine and Surgery; Medical Department, Valparaiso University; Attending Surgeon St. Mary's of Nazareth Hospital; Attending Gynæcologist, Francis E. Willard National Temperance Hospital, Chicago. With one hundred and eighty-seven illustrations, twenty-five of which are in colors. New York: Rebman Company, 1123 Broadway.

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Miscellaneous.

The Pallid School Girl

In view of the modern methods of education, which force the scholar at top speed, it is not to be wondered at that the strenuous courses of study prescribed for the adolescent girl more than frequently result in a general breakdown of both health and spirits. Each winter the physician is consulted in such cases and almost always finds the patient anæmic, nervous and more or less devitalized. In most instances a rest of a week or two, together with an efficient tonic, enables the patient to take up her school work again with renewed energy. Pepto-Mangan (Gude) is just the hæmatinic needed, as it acts promptly to increase the red cells and hæmoglobin, and to tone up the organism generally. It is particularly suitable for young girls because it never induces or increases constipation.

The Fable of the Wise Man of Wye

There was a certain wise man who was mayor of the town of Wye, in the State of Virginia. When in the course of human events the town of Wye began to grow and be great and wealthy, certain of the good citizens of the town came to the mayor and said unto him, "Behold our town has waxed great and rich, let us issue bonds and provide ourselves smooth pavements and electric lights." But the mayor, being a wise man, did not know it all, and read the papers. Knowing that typhoid fever is a preventable disease and our national disgrace, and knowing that it is better for a town to be healthy than beautiful, he said to them, "Behold, let us issue bonds by all means and sell them at par and interest, but let us first give to our citizens good and pure water; to every home let us supply it, and let us dig in the streets and lay sewers and connect every house with them, to the end that typhoid fever may disappear from our midst, and that we may be healthy."

So they hearkened to the wise mayor and sold the bonds and put in the water and laid the sewers and compelled every citizen, under the law, to use both. And behold in a few years there was no more typhoid fever in the town, and the citizens waxed strong and healthy, and the fame of the town went abroad in the land. Whereupon divers rich men came to live in the

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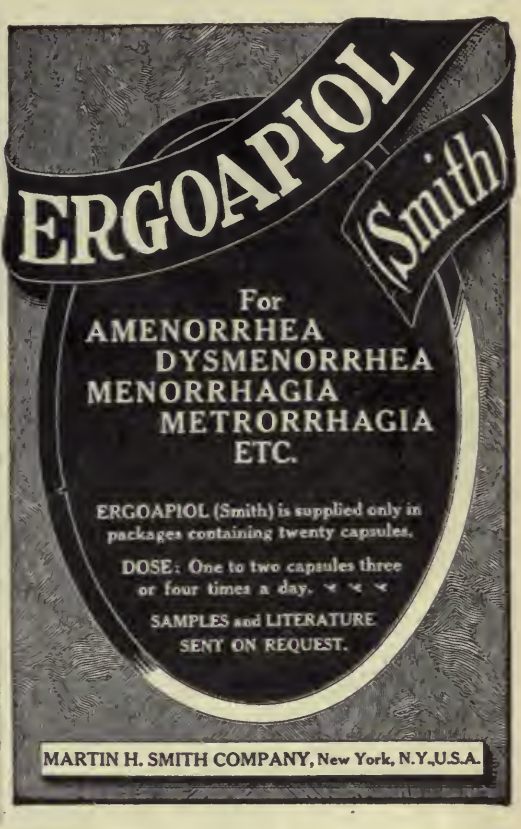

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FOR LITERATURE, ADDRESS

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town because of its exceeding healthfulness, and taxable values rose. And then did the citizens sell further bonds, and they had for themselves pavements and lights, and the town grew and prospered and became beautiful. And the wise mayor patted himself on the back in secret for his good counsel.

Moral—It is Better to be Healthy than Pretty.—*Virginia Health Bulletin.*

Treatment of Bronchial Asthma

Kayser, in *Therapeutiche Monatshefte,* recommends that one tablespoonful of a five per cent. solution of calcium chloride be given in milk every two hours for at least three or four days. This proved effective as a prophylactic measure in cases of bronchial asthma under his care. In a number of instances the paroxysms did not return for several months after the administration of calcium chloride. While the effect of the drug generally became manifest on the third day, Kayser considers it advisable to continue its administration for a week.—*New York Medical Journal.*

Vaccines in Typhoid

About six years ago the writer began to use vaccines in the treatment of typhoid fever. Since that time he has thus treated more than one hundred cases, and has obtained numerous articles upon the same subject written by physicians in various parts of the world. It seems possible, however, that some may have escaped notice. He also realizes that many of the profession may have treated some cases without reporting them. A paper upon the subject is now in the course of preparation. In this it is earnestly desired to incorporate reports from a large number of cases—good, bad, and otherwise. He accordingly makes the following request to the readers of this journal:

Will anyone who has used vaccines in the treatment of typhoid fever, whether but one case or more, kindly communicate to him that fact, accompanied by name and address of the reporter. If the results have already been reported, a note of the journal in which they appeared will be sufficient. If they have not been reported, a short blank form will be sent to the physician to be filled out. Due credit will be given in the article to each person making a report. If any physician happens to know of other confreres who have any such cases, it will be appreci-

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ated if he sends their names, as they may not happen to read this note. It is hoped that by this means a sufficient number of cases may be collected to somewhat definitely settle the now-mooted question whether vaccines are or are not of benefit in typhoid therapy.

Reports of cases will be accepted at any time in the future, but preferably by November or December of the present year.

Kindly communicate with Dr. W. H. Watters, Director of the Department of Pathology and Bacteriology, Evans Institute for Clinical Research, Boston, Mass.

Pituitrin in Difficult Parturition

Every physician who has any considerable obstetrical practice owes it to himself and to his patients to familiarize himself with the oxytocic function of Pituitrin. Here is an agent which, according to reports in the medical journals of the Old World (notably of Germany)—if obstetricians adopt it generally, as now seems likely—is destined to rob childbirth of much of its pain and terror. What shall we say of such an agent that fails but once in over a hundred cases in which it is used? And that is just what happened in Dresden, according to a report of Vogt, of the Royal Gynæcological Clinic of that city. Vogt adds: "It was not necessary to have recourse to forceps in a single instance in which Pituitrin was employed."

For the benefit of physicians who are uninformed on the subject, it may be said that Pituitrin is an extract of the posterior or infundibular portion of the pituitary gland. While in use for a number of years—chiefly, perhaps, as a hæmostatic and heart stimulant—it is only of late, comparatively speaking, that its value in uterine inertia has been fully understood. The product is prepared and marketed by Parke, Davis and Co., to whom inquiries should be addressed for further particulars of this remarkable agent. Not very long ago the company issued a pamphlet in which a number of interesting and surprising case reports were published. We understand that copies of this Pituitrin pamphlet are still available and may be obtained upon application to Parke, Davis and Co., at their offices in Walkerville, Ont.

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